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# Continuity and change in the Wiseman area of Alaska: A look at land and renewable resource use over time

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University of Alaska Fairbanks, 1993



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# CONTINUITY AND CHANGE IN THE WISEMAN AREA OF ALASKA

## A LOOK AT LAND AND RENEWABLE RESOURCE USE OVER TIME

A

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By

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# CONTINUITY AND CHANGE IN THE WISEMAN AREA OF ALASKA

## A LOOK AT LAND AND RENEWABLE RESOURCE USE OVER TIME

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## ABSTRACT

Land and renewable resource use by residents of the Wiseman area in the central Brooks Range of Alaska was investigated in 1991-1993. The study documents current and historic land and renewable resource use patterns of local residents, records resident and agency management concerns regarding these uses, and analyzes opportunities and constraints that exist for rural Alaskan communities in utilizing renewable resources. The research was accomplished through resident interviews, participant observation of community activities, and review of other community studies. Conclusions include: (1) the Wiseman community exhibits characteristics of a mixed subsistence/cash economy; (2) residents rely on resources harvested in the various local federal, state, and private land management units; and (3) the establishment of the nearby National Park, and the construction of the Dalton Highway, have significantly affected local resource use. The study also demonstrates how community involvement in research effectively allows comprehensive documentation of land and resource use.

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## ACRONYMS

I have attempted to reduce the number of acronyms used in this thesis. However, for the sake of brevity I use the following acronyms:

| | |
|---|---|
| ADF&G | The Alaska Department of Fish and Game |
| ANILCA | The Alaska National Interest Lands Conservation Act |
| BLM | Bureau of Land Management |
| DOT | Department of Transportation (State of Alaska) |
| GMU | Game Management Unit |
| NPS | National Park Service |

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# I. INTRODUCTION

During the period from October 1991 to April 1993, I sought to understand how the residents of the Wiseman area live, both from a contemporary and a historic perspective, in the central Brooks Range of Alaska (Map 1). A major purpose of the research was to document land and renewable resource uses, and to understand the perceptions and concerns of both local residents and agency land managers regarding those uses. This data could be used in management decisions regarding the local land base and its renewable resources. In addition, information from this study is designed to complement that gained from other rural Alaskan communities regarding the nature of rural economies in which use of renewable resources remain significant. Major objectives of the study were to:

1) Document current land use patterns and use of renewable resources by local residents.

2) Examine and summarize historic renewable resource and land use patterns in the area.

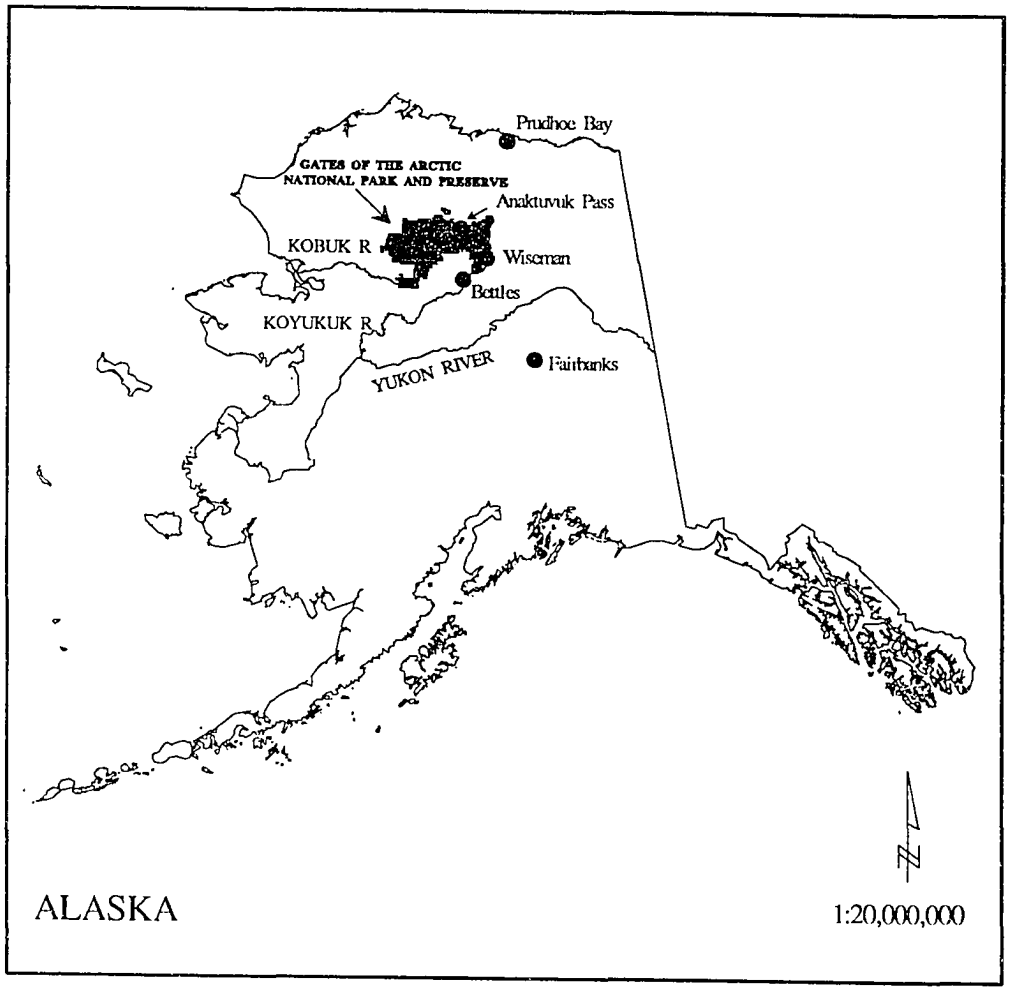
3) Record concerns about local land and renewable resource use, and frameworks of understanding regarding those uses, of both local residents and agency land managers.

4) Analyze opportunities and constraints that exist for rural Alaskan communities to utilize local renewable resources.

The Wiseman area includes the communities of Wiseman and Nolan, lands to the west in Gates of the Arctic National Park and Preserve, and lands to the east in the drainages of the Chandalar River System (Map 2). The area extends north and south along the Haul Road (otherwise known as the Dalton Highway). The study includes

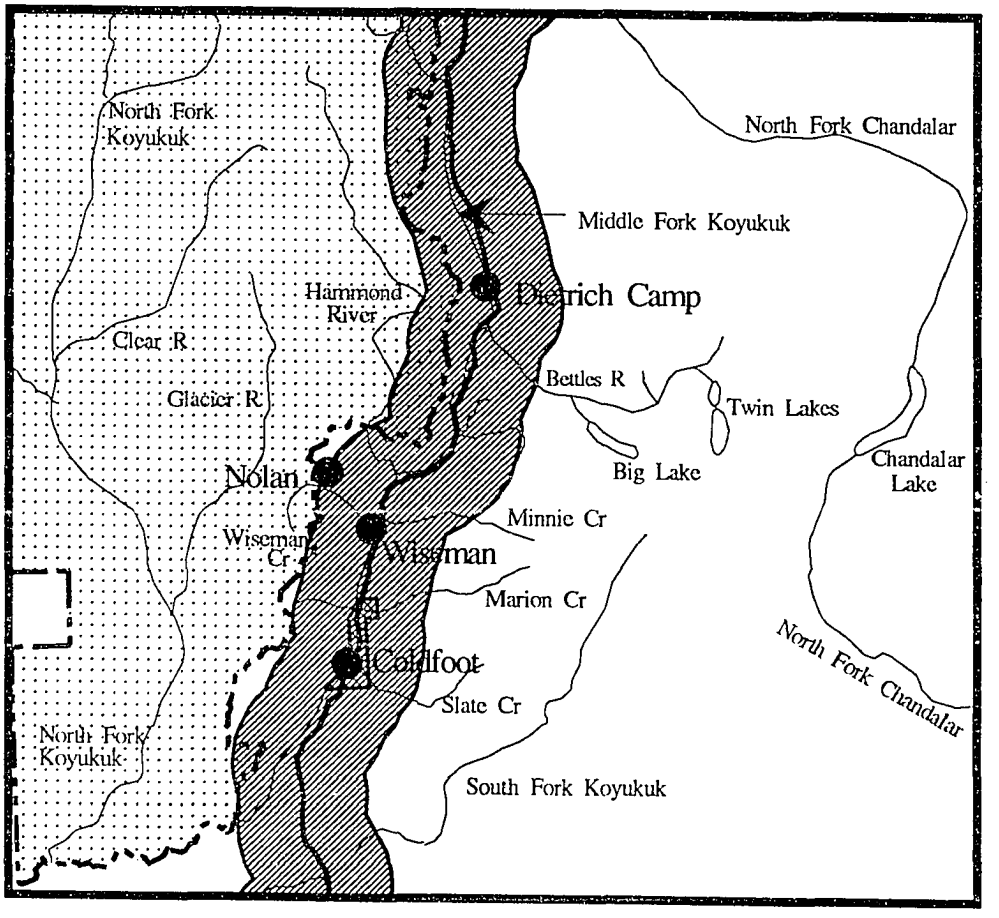
MAP 1

WISEMAN STUDY AREA LOCATION MAP



MAP 2

GENERAL LOCATION OF SETTLEMENTS, PHYSIOGRAPHIC FEATURES, AND APPROXIMATE LAND MANAGEMENT BOUNDARIES IN THE AREA SURROUNDING WISEMAN




Haul Road Corridor

Gates of the Arctic National Park

State Land

Haul Road

Park Boundary

1:930,000

people who reside on lands to the north of Coldfoot, mile 175 on the Haul Road, to the south of Dietrich Camp, mile 209 on the Haul Road, and within approximately eight miles east and west of the road. This study area was designated by the National Park Service (NPS). I gathered much of the data in this thesis for a report on the Wiseman area, which was funded by the NPS through the Cooperative Park Studies Unit at the University of Washington. I categorize the people included in this study in four separate groups:

(1) Wiseman community residents.

(2) People who own property in Wiseman but who claim permanent residency outside the Wiseman area.

(3) Nolan residents.

(4) People who live for part or all of the year within the Wiseman area, but outside the communities of Nolan and Wiseman.

The main focus of the study is the community of Wiseman itself, located on the west bank of the Middle Fork of the Koyukuk River. It is approximately two hundred and eighty road miles north of Fairbanks, and is situated across the river from the Trans-Alaska Oil Pipeline ("the pipeline") and adjacent Haul Road. The Wiseman community lies approximately twelve miles north of Coldfoot, and consists of roughly 187 acres of privately owned land that is surrounded by land administered by the Bureau of Land Management (BLM). According to BLM land patent records, this land was sold to Wiseman residents in 1990.

Wiseman is surrounded by a strip of land known as the Dalton Highway or Haul Road corridor, which extends five miles on either side of the Haul Road along its length from the Yukon River Crossing to Deadhorse. Although the BLM manages

the land both encompassed by and outside this corridor, land and resource use policies differ on either side of its boundaries. Coldfoot itself lies in an area where development is allowed within the corridor (a "development node"). This area is owned, as of August 1992, by the State of Alaska. State ownership extends to approximately six miles south of Wiseman. The Gates of the Arctic National Park and Preserve boundary is located approximately five miles to the west of Wiseman, and the settlement of Nolan lies adjacent to this boundary (Map 2). Wiseman area residents, then, are impacted by management policies implemented by the State of Alaska, the BLM, and the NPS.

This research examines the relationship between the local rural residents and a National Park system unit, a federally managed transportation and development corridor, and a state owned development node. Increasingly, federal, state, and private ownership patterns have created a complex mosaic of regulations which individual community members must consider in their resource use activities. Wiseman is not unique in this respect, but it does provide a good case study because of the diversity of interests and because of access questions which the Haul Road raises.

The population of the Wiseman area is primarily non-Native, so this research investigates the relationship of non-Native Alaskan rural residents to the local resource and land base. In addition, the project develops a community based, collaborative research process in a rural Alaskan community.

Gates of the Arctic National Park is listed in the Code of Federal Regulations as a park where "[s]ubsistence uses by local rural residents are allowed pursuant to the regulations of this Subpart . . . " (36 C.F.R. 13.41 and 13.41(c)). The definition of a

local rural resident is:

> Any person who has his/her primary, permanent home within the resident zone as defined by this section, and whenever absent from this primary, permanent home, has the intention of returning to it. . . .
> (36 C.F.R. 13.42(a)(1)(i)).

Wiseman is currently designated as a resident zone for Gates of the Arctic National Park (36 C.F.R. 13.64(a)(1)). A resident zone is defined as:

> . . . the area within, and the communities and areas near, a national park or monument in which persons who have customarily and traditionally engaged in subsistence uses within the national park or monument permanently reside.
> (36 C.F.R. 13.42(b)).

Nolan does not hold this designation. This thesis details the relationship between the residents of the Wiseman community and the renewable resources in Gates of the Arctic National Park and Preserve as part of a broader examination of land and renewable resource use by area residents.

Increased ease of access to rural resources and the resulting development impacts or potential impacts are concerns that face many rural Alaskan communities. Since 1976, the Wiseman area has been connected to population centers outside the area by the Haul Road. This transportation corridor has provided an avenue for people to reach the area easily. This thesis examines changes to the Wiseman area and to the community of Wiseman in particular resulting or potentially resulting from this access corridor.

Section 801 of Title VIII, Subsistence Management and Use, of the Alaska National Interest Lands Conservation Act (ANILCA), provides for consumptive use of renewable resources on federal public lands in Alaska through stating in part:

> The Congress finds and declares that -
> (1) the continuation of the opportunity for subsistence uses by rural residents of Alaska, including both Natives and non-Natives, on the public lands and by Alaska Natives on Native lands is essential to Native physical, economic, traditional, and cultural existence and to non-Native physical, economic, traditional, and social existence; . . .
>
> (Sect. 801, PL 96-487, 1980).

Although many Alaskan Native communities have been subjects of subsistence research, few studies exist describing rural Alaskan communities that are primarily comprised of a non-Native population. The majority of Wiseman community residents is non-Native, so an examination of the use of the land and renewable resources by these residents can provide insights into the relationship between non-Native residents of rural Alaska and the local land base. The concept of a "mixed subsistence/cash economy" (Lonner 1986, Wolfe et al. 1984), used to describe rural Alaskan Native communities whose residents depend on both renewable resource harvest and cash income for economic support, is applied to the community of Wiseman.

The Wiseman project evolved into a cooperative research effort, whereby the people who were subjects of the study became involved in the research design and process. This evolution became necessary because of concerns that the research would be used solely to make agency management decisions that would negatively affect local residents. This concern is in opposition to the more basic and primary research goal of creating an understanding of local livelihoods that are based on utilization of renewable resources. This understanding could then lead to management decisions. The initial reluctance of many local residents to provide information for the study was largely overcome by inviting them to help design ways of protecting individual privacy, and incorporating their review and comment into the

report. This thesis therefore provides insights on methods of conducting community-based, collaborative research in rural Alaskan communities in which local concerns are addressed.

Originally, my task was to examine the subsistence lifestyle of local residents by looking at subsistence activities and subsistence use of natural resources, or use of subsistence resources. However, it became apparent when asking questions involving the word "subsistence," responses were affected by the individual's definition of subsistence. Currently there are two separate systems of subsistence management in Alaska, the state and the federal system. Each has its own regulatory framework and legislative mandate (Caulfield 1992).

According to the Random House dictionary (1980), "subsistence" is defined as the "1. state or fact of subsisting: 2. means of supporting life, esp. a minimum livelihood."

"Subsistence uses" are defined in ANILCA as:

> [T]he customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.
>
> (Section 803, PL 96-487, 1980).

The State of Alaska defines "subsistence uses" as:

> . . . [T]he noncommercial, customary and traditional uses of wild, renewable resources by a resident domiciled in a rural area of the state for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption; . . .
>
> AS 16.05.940 (32).

Wiseman area residents tended to define subsistence in terms of a way of living. The following are quotes from local residents:

> " . . . If you are doing it [a subsistence activity] to put meat on the table, or supply something for your livelihood . . . if it augments your income or is your only income, [this] is subsisting."
>
> "Subsistence is . . . the harvest of those resources, but [it is] also a tie to the land . . . it gives you a place or something in the natural scheme of things. Passing those knowledges on to your kids . . . a respect for the country, you know, and the animals . . . utilizing them wisely, and non-wastefully . . . People who depend on subsistence can't or won't normally abuse their subsistence resources, [because] then they wouldn't have them on a continuing basis . . . ."
>
> "Subsistence is a way of life . . . I think the bottom of subsistence is a cultural . . . is a lifestyle."

This thesis examines the use of the land and resources of one rural Alaskan community in detail, to provide a framework for understanding the differences in how subsistence is perceived. Each person who reads this thesis may well have their own definition, perhaps incorporating some of the above views, and perhaps not. The intent of this thesis is not to debate the definition and/or merits of the word "subsistence," but to describe as accurately as possible the local patterns of land and renewable resource use in the Wiseman area. To avoid confusion in the varying perceptions of the meaning and definition of the word "subsistence," I have sought to describe activities and practices, rather than simply defining them as "subsistence activities."

To summarize, this document will provide a complete picture of the relationship of a primarily non-Native rural Alaskan community to their local resource and land base. It provides an examination of community resource use activities that are

impacted by management policies of multiple agencies, as well as by the development of a transportation corridor. The thesis also provides a glimpse of how this researcher involved community members in a community-based research design.

## II. THE RESEARCH PROCESS

### A. Methodology

A major aspect of this research was to initiate and maintain an open working relationship with Wiseman area residents. This required multiple visits to the area. Initially, Alan Jubenville (University of Alaska Fairbanks) and Darryll Johnson (Cooperative Park Studies Unit, Seattle) contacted one or two Wiseman households in August, 1991 to present the idea of the project. Harry Bader, the co-principal investigator listed in the NPS Work Plan (along with Alan Jubenville) and I visited Wiseman on October 10, 1991 to introduce both ourselves and the project to Wiseman community residents.

The initial fieldwork and observation period occurred in January and February of 1992. I rented a cabin in Wiseman for a five week period, and spent my time going out on traplines with trappers, visiting wood yards, maintaining a personal cabin household, conducting the initial formal survey, and spending many hours visiting informally with residents. During the first two and a half weeks, I familiarized myself with the area and introduced myself and the study to local residents. I conducted formal interviews during the subsequent two and a half weeks. A working relationship grew out of this time invested in becoming familiar with the Wiseman area, with residents' concerns, and with resource use activities. Table 1 presents the number and type of interviews I conducted during this period.

**Table 1**

**Number and Type of Interviews Conducted, Jan./Feb. 1992**

| Type of Interview | Number of Interviews |
|---|---|
| Total complete initial interviews | 10* |
| Fully taped complete interviews | 4 |
| Partially taped complete interviews | 3 |
| Complete interviews with no taping | 3 |
| Partial interviews (no taping) | 2 |

* This total includes seven Wiseman households, one of which was residing in Fairbanks during the initial fieldwork period, and three Nolan households.

Eighty percent of Wiseman households participated in the primary survey, as did eighty percent of the households residing in Nolan during the first fieldwork period. When the two follow-up surveys were conducted in the community of Wiseman, ninety percent of the resident households participated at least in part.

Local residents had strong suspicions about the motives behind the study. I was told directly on several occasions that there must be NPS motives for conducting this study since the Service is funding the study. When community residents declined to map areas of land and resource use, I became especially aware that Wiseman residents were concerned about the way information derived from the Wiseman Project might be used in management decisions. As a result of this refusal, I initiated the next step in gathering information. At the end of February 1992, I notified all Wiseman community residents that Harry Bader and I would be visiting Wiseman with the intent of discussing methods of mapping areas of renewable resource use. I asked residents to attend a community meeting, and to come prepared with ideas

about techniques of mapping resource use areas. As a result of that meeting, and continued dialogue with community residents, spatial information of Wiseman resident land and resource use is presented. An understanding of the approaches used in developing the cooperative nature of this community research process provides the necessary context for evaluating the data. A more complete description of this process, including further details regarding the development of use area presentation, is presented in Chapter VII.

Upon my return to Fairbanks following the first fieldwork period, I copied my interview notes and tapes, and sent copies of each to their respective households of origin. This enabled both those being researched and the one conducting the research to have access to the information base provided by the household. The fact that I provided area residents with copies of the work in progress for review enabled them to see the progression of the study and how the information was being used. This boosted the credibility of the overall study, and facilitated cooperation in continuing the research.

In the first follow-up survey, conducted in April 1992, I requested information regarding the specific location (inside or outside the park area) of various game species hunted and trapped. I also asked for information on transportation methods and trapline habitat characteristics. In the second follow-up survey, I requested a further break-down of the harvest information into pre-1980, 1980-1985, and post-1985 time frames, along with qualitative data relating to harvest variation. I chose these dates because 1980 was the year that Gates of the Arctic National Park and Preserve was established, and 1985 was a year midway between 1980 and 1991.

The two follow-up surveys focused on Wiseman households only, as the NPS requested more detailed information on this community. Copies of all survey forms can be found in Appendix C. Table 2 describes my visits to the Wiseman area.

As Table 2 illustrates, I visited the Wiseman area 11 times, totaling approximately 92 days. This time spent in the field area represents longer and more frequent visits than the original study plan called for. My presence provided for a much more thorough understanding of local livelihoods than would otherwise have been possible.

Harry Bader and I agreed at the initial October 1991 Wiseman community meeting to provide adequate time for community review and comment on both the NPS report and the graduate thesis. Participation in this project was voluntary, and cooperation depended on how this project was initially presented, on follow-through with verbal contracts made, and on allowing time for thorough community involvement.

Originally, I intended to provide the local Gates of the Arctic park managers with copies of the draft NPS report as it was compiled, once each stage was reviewed by Wiseman area residents. I considered increased communication and involvement of the local park office in the project desirable, as the research itself potentially had the most direct effect on agency management at this level. However, due to procedural difficulties, this involvement of the Gates of the Arctic office did not occur until the official review phase. Initially, I was writing both the NPS report and this thesis, but in January 1993, Harry Bader took over as author of the NPS report.

During the late summer, fall, and winter of 1992/93, I was able to extract useful information pertaining to the Wiseman area from various tapes made by the

**Table 2**
**Date, Location, and Purpose of Fieldwork Periods**

| Dates in the Field | Location of Visit | Purposes* |
|---|---|---|
| 10/10/91 | Wiseman | Wiseman community meeting to introduce the project. |
| 1/9/92-2/13/92 | Wiseman area | Familiarization with local residents, the area, and resource use activities. Conduct initial interviews. |
| 4/20/92 | Wiseman | Wiseman community meeting to discuss mapping techniques and introduce the first follow-up survey. Provide copies of the thesis working draft to Wiseman residents for review. |
| 4/24/92-4/25/92 | Wiseman | Develop and collect mapped information. Gather the first follow-up survey data. |
| 5/10/92-5/13/92 | Wiseman | Collect comments, concerns and data clarification regarding the partial draft of the NPS report previously mailed to Wiseman residents. |
| 6/6/92-6/21/92 | Wiseman area | Conduct the second follow-up survey with and receive comments on the thesis working draft from Wiseman residents. Update Nolan residents on project progress and provide them with copies of the working draft of the thesis. |
| 7/4/92-7/6/92 | Wiseman | Distribute copies of the next working draft of the NPS report to Wiseman residents for review. |
| 7/6/92-7/15/92 | Gates of the Arctic National Park | Walk from Wiseman to Anaktuvuk Pass through some of the areas that Wiseman residents told me were areas in which they utilize renewable resources. Experience directly wilderness recreational activities, one of the purposes designated in ANILCA for which Gates of the Arctic National Park was established (Sec. 201(4)(a). |
| 7/15/92-7/17/92 | Anaktuvuk Pass | Gain information regarding historical connections between Anaktuvuk Pass and the Wiseman area. |
| 7/17/92-7/20/92 | Bettles | Visit people in the Evansville/Bettles area who interact(ed) with Wiseman residents, past and present. |
| 7/20/92-7/26/92 | Wiseman area | Receive comments from Wiseman residents on the NPS working draft report, and from Nolan residents on the thesis working draft. Visit and interview area miners. |
| 9/12/92-9/27/92 | Wiseman | Participant observation of Wiseman resident hunting activity. |
| 5/1/93-5/2/93 | Wiseman | Deliver complete thesis draft for review. |
| 5/27/93-5/31/93 | Wiseman area | Collect comments on complete thesis draft. |

* All visits to the area were observation periods, in addition to the specific purposes noted in the table.

University of Alaska Fairbanks Oral History Program. Topics discussed on the tapes cover both historical aspects of the Wiseman area and the development of the NPS management framework in Alaska as it pertains to the use of park land and resources by local residents.

Regardless of local perceptions and attitudes towards the study, I was always treated with respect by area residents, and was asked in for a visit whenever I went around knocking on cabin doors. I spent many hours drinking tea and visiting informally with residents, in addition to conducting the formal surveys. Many of my general observations about local perceptions and attitudes in this thesis came as a result of those visits and conversations. In addition to information gained in the formal interviews and through informal visits, I learned a tremendous amount about local livelihoods by being taken out on the trail to observe resource harvest activities. For example, I spent two days with members of one household, first following the tracks of a moose, and then helping to haul moose meat back to the community.

Information gained through direct experience contributes to my current level of understanding of the area, its human residents, and their use of the land and renewable resources. Although I continually made efforts to write down everything that I learned, so much was absorbed during my visits to the area that many of my comments are personal paraphrases of this information. Where this is the case, I have identified the information as being derived from my perceptions, and is based on general conversations and experience. Information directly quoted from taped interviews, or comments paraphrased from my notes of interviews, are written in block sections throughout the thesis.

## B. Research Limitations

The breadth and scope of this research were limited by a number of factors, including concerns about the confidentiality of information, suspicion of agency motives behind the study, initial individual hesitancy to become involved in the study, the difficulty in recalling specific details requested on the surveys, and the time required of individuals to participate in the study. Ethical considerations had a significant impact on the techniques used in the study, and on the way information is presented in this thesis.

Soon after my initial arrival in Wiseman, a resident pointed out to me that individual surveys would be relatively easy to attribute to their household of origin because of the small number of households in the area. This concern was not universal among residents, but it became clear that at least half the Wiseman households did not wish to be identified individually. In order to respect this desire for anonymity, no names of individuals living or owning property in the Wiseman study area are used in this thesis. Also, one household requested that individual household information not be shared with other area households. I felt consistency was important, so I decided that no individual household information would be made available to other area residents, or presented individually in the thesis. To maintain this consistency, I have not used individual names of any of the people I interviewed when speaking of their perceptions and concerns regarding local issues. However, information obtained from tapes archived at the University of Alaska Fairbanks is referenced.

When I first started on the project in September of 1991, I was told by a local NPS employee and by my employers at the University that no one who worked for an agency, federal or state, would be successful in completing the project. I understood this to be a reason for contracting the project to the University, since it might be viewed as a more "neutral" institution. Although I was never made to feel that my personal motives were suspect, the previously noted suspicion of motives decreased acceptance of the study by local residents in general. The main speculation of Wiseman residents was that the NPS was considering deleting Wiseman as a resident zone for Gates of the Arctic National Park and Preserve, which would mean that community residents would not necessarily be able to harvest renewable resources in the park area.

Overall, the community response to the study was mixed. Four Wiseman households were generally not opposed to the study, three were somewhat hesitant in their acceptance of the study, and three had major reservations about participating. In Nolan, one household initially held major reservations regarding the motives of the survey, and declined to participate in any way. After seeing the project progress over time, this household later provided information and feedback.

My presence in the area had an impact on the community of Wiseman. The nature of the ongoing research dictated that much of my time be spent visiting all households. The three specific Wiseman community surveys required significant amounts of time for households to complete. I was asking many questions, some of which were quite personal in nature.

The intensive questioning taxed individuals, although participating households generally made the effort to comply with requests for information. In one instance,

an individual who had spent lengthy hours sharing information about the household's activities was attempting to recall specific harvest details. Upon failure to recall exactly which harvest occurred at what location and in which time frame, the individual proclaimed: "I'm sorry Carol, I flunked your test. It's like me asking you how many pounds of quinoa [a grain I eat] did you buy in 1979, and at which stores did you buy it?"

This study of local land and renewable resource use patterns focuses on a subject that is of great concern to all residents. Living in such a diverse community and asking questions about sensitive issues has the potential to create divisions among area households. These potential social impacts of the study need to be acknowledged. The techniques and methods utilized in conducting the study, and the style of presentation of information in this thesis, are designed to minimize these impacts.

Many social aspects of the local lifestyle, such as the division of labor involved with resource use activities according to gender, and the role that home schooling plays in decisions regarding the viability of the lifestyle, are integral to a complete picture of local activities relating to renewable resource use. However, a discussion of these aspects is beyond the scope of this thesis.

Additional research limitations of this study include the fact that no distinction was made in the surveys between resource use activities in the Gates of the Arctic National Park and activities in the Preserve. The entire area of Gates of the Arctic National Park and Preserve is therefore treated in this thesis as a single unit, despite the fact that "Hunting and trapping are permitted in all National Preserves in accordance with applicable State and Federal law . . ." (36 C.F.R. 13.21(d)). Also,

1980 was used in the surveys as the date at which land management policies changed due to the enactment of ANILCA. In fact, Gates of the Arctic National Monument was established in 1978, and management policies regarding the area officially changed at this time. Additionally, fear of prosecution for any illegal harvest activity may affect the accuracy of some data, or inhibit full disclosure of information.

## III. DESCRIPTION OF THE WISEMAN AREA

### A. Description of the Natural Environment

The physical location of Wiseman, described in the introduction, is portrayed in maps 1 and 2. The area lies at approximately 67°23'N latitude, 150°07'W longitude, approximately seventy-two road miles north of the Arctic Circle, and fifty miles south of the northern extent of treeline. Wiseman's climate is subarctic continental (Will and Hotch 1982, 7). The sun is not visible in Wiseman from early December to early January (Marshall 1933, 19-20), in part because the 5,000 foot mountains on each side of the Middle Fork of the Koyukuk River prevent direct sunlight from reaching the valley floor during this period. As I experienced, however, there is adequate light for outdoor activity even during these sun-less days. Although sub-zero temperatures are the norm in the winter, it seemed to me that forty or fifty degrees below zero Fahrenheit for any length of time is considered "cold" as opposed to "normal" by local residents. Coldfoot claimed a temperature of eighty-two degrees below zero Fahrenheit in the winter of 1989. According to locals the snow pack can vary widely, from about a foot and a half on the ground when I arrived in January 1992, to numerous feet in the valley bottoms. During the summer months, the Wiseman area experiences twenty-four hour light, and temperatures are warm: in the seventy and eighty degree Fahrenheit range (Marshall 1933, 21, Ulen 1983, 81, and personal experience).

Although four seasons have been described for the Wiseman area (Marshall 1933, 22-28), I feel it is more useful to categorize local residents' land and resource use activities into the seasons of "between freeze-up and break-up" and "between break-up and freeze-up." "Freeze-up" and "break-up" refer to the freezing over and melting of the rivers and creeks in the area, particularly the Middle Fork of the Koyukuk River. Freeze-up usually occurs in late September to early October, and break-up usually occurs sometime in May (Marshall 1933, 23-27, and personal experience).

Wiseman is situated on the right bank of the Middle Fork of the Koyukuk River. The Haul Road and the oil pipeline follow the Middle Fork north and south through the area. The broad, U-shaped valley of the Middle Fork is roughly two miles wide at Wiseman, and varies from one to three miles wide in this region. The major tributaries in the area that empty into the Middle Fork are (north to south): Dietrich River, Kuyuktuvuk Creek, Bettles River, Hammond River, Wiseman Creek, Minnie Creek, Marion Creek, and Slate Creek (Map 2).

To the west of the Middle Fork drainage, one enters the region that is now known as Gates of the Arctic National Park and Preserve. Peaks become a little higher (over 6,000 feet), and more rugged. To the east of the Middle Fork drainage are found the high (5,000 to 6,000 feet) yet more rounded mountains of the "Chandalar Country." Large lakes, such as Big Lake (Bob Johnson Lake) and Chandalar Lake are found here in some areas of the valley bottoms.

The general geology of the area is best described in a state Department of Natural Resources publication:

> The Wiseman area is typical of the central and southern Brooks Range. Glacier-scoured valleys contain alluvial and glacial deposits and are walled by high ridges of limestone, shale, sandstone, phyllite, and schist. Alluvial

> fans and colluvial aprons extend from the lower valley walls toward the flood plain of the Middle Fork Koyukuk River.
>
> (Adams and Mull 1989, 82).

The Wiseman area is for the most part blanketed with spruce, up to about 2,500 to 3,000 feet in elevation. Black spruce generally is found in the wetter areas, while white spruce is found in the more well-drained locations. Often large areas of black spruce indicate the presence of permafrost, while white spruce indicates permafrost-free areas. Above tree line, open tundra and rock outcroppings prevail. Willow and cottonwood are found in riparian areas, and brushy stands of alder occur in moist areas on mountainsides. Small stands of birch are found in some south and west facing, well drained locations. Sphagnum moss and tussocks cover open areas in the lowlands. A general understory of thick moss, lichens, and shrubs predominate in the stands of spruce. Wild berries are found in areas favorable to their growth, both in bogs and on upper slopes.

Animal life in the Wiseman area includes moose, Dall sheep, grizzly bear, black bear, wolf, lynx, wolverine, marten, fox, beaver, weasel, mink, snowshoe hare (locally known as rabbits), ground squirrel, red squirrel, grouse, ptarmigan, and marmot, along with the occasional muskrat, porcupine, and coyote. Caribou are sometimes found within the study area. According to local residents, the creeks and rivers of the area do not support an abundance of fish, but species present in the area are grayling, lake trout, pike, burbot, and the occasional Arctic char, whitefish, and salmon (king and chum).

## B. Description of the Human Population

At the beginning of the study period, there were twenty-nine residents living in the community of Wiseman who deemed Wiseman their permanent residence. With two births, this total came to thirty-one by the end of the study period. This population of sixteen adults and fifteen children (children being classified as under eighteen years of age) comprised ten households. The average household size in Wiseman is 3.1 persons. Five of these households are families with between one and four children. The Wiseman children are relatively young; all but one were under age twelve at the end of the study period.

In this study, "full-time Wiseman resident" refers to members of the ten households domiciled in Wiseman throughout the study period. As is discussed in Chapter VIII, area residents generally felt that it was common for household members to leave the area for part of the year to earn cash income. During the study period, all but three of the Wiseman households did leave the study area for this purpose.

Wiseman is a predominantly non-Native community organized and incorporated as a non-profit community association (Cecil 1992). A non-profit community association is a legal entity that has no police powers or enforcement capabilities of local ordinances (ibid.). It is the smallest recognized unit of local government. If the population is greater than twenty-five, the community association is eligible to receive state revenue sharing funds for community improvements (ibid.). Wiseman incorporated in October of 1989, and receives a variable amount of these funds each year (ibid.). Apparently the shares have been in the order of $10,000 to $11,000

(Cecil 1992). Mail arrives in Wiseman once a week via Coldfoot post office and the Haul Road. Most residents and visitors to the area also arrive via the Haul Road. Some people utilize the state-owned non-maintained airstrip. The Wiseman Trading Company re-opened as a small general store in Wiseman in 1991. Public facilities in the community consist of a spring and a single telephone. Map 3 illustrates the layout of the Wiseman community. There are no public facilities or services in Nolan, but Coldfoot sells fuel and some food items, in addition to having a post office and a commercially used airstrip.

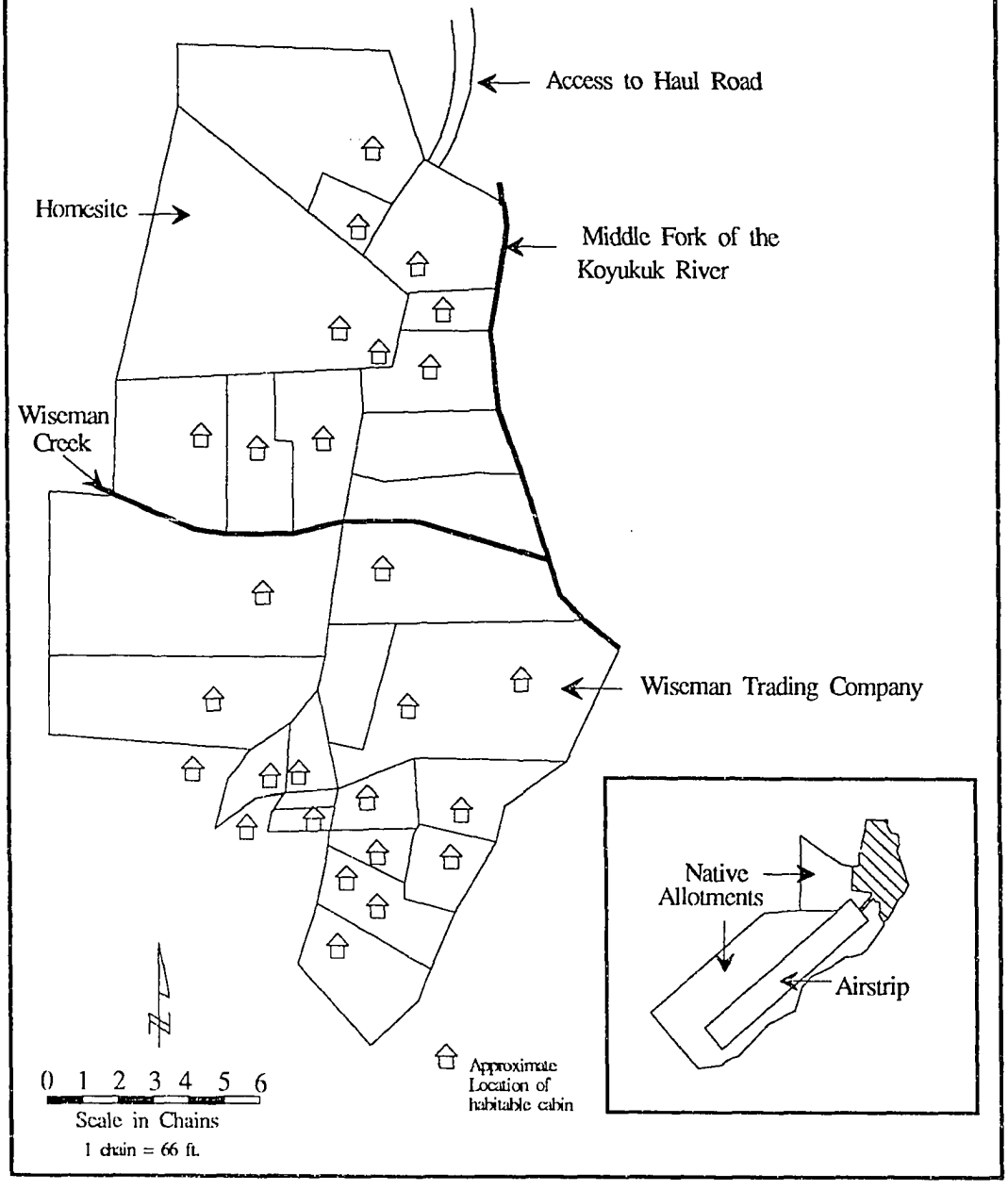
Generally speaking, mining is not prominent in the lives of current full-time Wiseman residents. One Wiseman household engaged in some mining activity during the summer of 1992, and another was working for a mining operation in Nolan at the end of the study period. Another household owns a mining claim. Nolan is a settlement comprised of miners working on mining claims. Eighteen people in Nolan, fifteen adults and three children, were initially contacted during January and February 1992, when I first stayed in the area. The number in residence there dropped to six while interviews were being conducted during that time period, as one mining operation closed down. By the summer of 1992, however, the claim had been sold, and mining resumed. The population of Nolan was around thirteen to twenty that summer. The variation in this figure was caused by the fact that several other mining claims in the Nolan area were worked at some point during the summer.

I visited five other mining camps in the study area in July 1992, which accounted for about a dozen individuals. At least four other camps in the area were operational at this time. All the mining operations I was aware of were relatively small, with usually two, three, or perhaps four people working the claim.

MAP 3

WISEMAN COMMUNITY LAYOUT

APPROXIMATE LOCATION OF LOTS AND HABITABLE CABINS



In the summer, my transport consisted of an elderly bicycle, so I was not able to move throughout the study area as much as I had anticipated to visit mining camps. Later I had the use of a two wheel drive pickup, which afforded me limited travel north and south on the Haul Road. In the winter I was able to travel throughout the area on a snow machine, but most of the mining camps, with the exception of those at Nolan and two camps in the Middle Fork valley, were closed down at that time. Moreover, as the main focus of the study was the community of Wiseman itself, I was less thorough in my attempts to contact and gain information from each individual in the area outlying Wiseman. What I did learn, however, is that a complete, detailed history of the Koyukuk Mining District existed in the memories of the current area miners, and comprised a study in itself.

There are fourteen non-resident Wiseman property owners. In two of these instances, family members from different households own property. The Harry Leonard homesite owners are included in this total. In addition, two Native allotments exist in Wiseman, each of which contain one cabin. Map 3 shows the location of the homesite and Native allotments. A family member of one of the allotment owners lived in one of these cabins from May through August of 1992, and the cabin on the other allotment was rented to one of the current Wiseman households. Three of the other current Wiseman households live in cabins rented from non-resident Wiseman land owners. The other properties are not available for rent. Including the Telegraph Office, which is currently being renovated for a home, there are twenty-seven habitable cabins in Wiseman. This does not include the old Post Office or the so-called "Gas House." Six rooms above the store and one small

new cabin were available for rent in the summer of 1992, and another small cabin was under construction for this purpose.

In July 1990, the land in Wiseman was sold by the BLM to the people who owned the cabins on the land lots (BLM Patent Records). Twenty-four lots with an average size of 1.08 acres were sold at this time (BLM 1984 Appraisal Report). According to the BLM in 1989:

> The community of Wiseman occupies public land managed by the Bureau of Land Management's Arctic District. Long term occupancy without legal title is not allowed on public lands. Several unsuccessful attempts to resolve the problem were tried by the community residents in the 1970s. In 1982, the BLM decided to sell the land to the occupants. After seven years of research and boundary negotiations, BLM is now selling individual parcels of land to those who applied for title in the early 1970s.
>
> (BLM News Release #F-0-07, 12/22/89).

# IV. HISTORIC LIVELIHOODS IN THE WISEMAN AREA

## A. Introduction

The intent of outlining land and resource use by humans in the Wiseman area from a historic perspective is to provide a baseline against which contemporary use patterns can be compared. As I learned about the history of the Wiseman area, I became aware of an emerging sense of both continuity and change between historic and contemporary livelihoods. Through looking at historic livelihoods in the Wiseman study area, one can gain the necessary background for assessing the impacts of relatively recent land management actions, such as the creation of Gates of the Arctic National Park and Preserve, and the construction of the oil pipeline and Haul Road.

Individuals have attempted to pull together in print details of life in the upper Koyukuk in times past: Robert Marshall in *Arctic Village* (1933), Margaret Murie in *Two In The Far North* (1957), William Brown in "Gaunt Beauty . . . Tenuous Life" (1988), and Tishu Ulen, Shirley English, and Dr. Walter Johnson in Alaska Geographic's *Up The Koyukuk* (1983), for example. In addition, many people that I have met through the course of this research have, as one person put it, "thousands of memories" of the Wiseman area. Some people who own property in Wiseman have collected, along with their memories, photos, letters, tapes, and manuscripts from the old-timers. As one of these people commented: "I just want to see the historical value and integrity of the place protected."

The anticipated "snowball effect" of asking known individuals who to seek Wiseman historic information from turned into an avalanche. I became overwhelmed with names, dates, stories, and recollections. When I asked about what people did in the Wiseman area, how did they live, I was told many stories about the lives of Wiseman old-timers. When I used the word "subsistence" to try to explain specifically what information I was looking for, I received shrugged shoulders, and, typically, "I probably can't help you with that." In this thesis I have attempted to highlight information that forms the background for contemporary patterns of land and resource use in the area.

Sadly, this research was conducted at least four years too late. Charlie Breck, Ross Brockman, and Tishu Ulen all died in 1991-92, before I could speak with them. These people, along with Harry Leonard who passed away in 1989, all knew a tremendous amount of detail about life in the Wiseman area. Tishu Ulen spent much of her life "in and around Wiseman" (Ulen 1983, 48), and Charlie, Ross, and Harry were known as the most recent Wiseman old-timers. They arrived in the area in the 1930s to 1940s, and stayed there until they could no longer live independently (the late 1980s). What I realized, however, is that these people are not "gone" completely. They are still very much alive in the memories and stories I have been told over the last year and a half.

## B. Native Occupation of the Area

From a historic perspective, the Wiseman area is located in a region of contact between the Eskimo to the north and west and the Athabascan Indians who lived on the Chandalar and the Koyukuk Rivers (Marshall 1933, 29). Of the latter, the Dihai Kutchin were a mountain people who inhabited the upper Koyukuk and Chandalar region for a while:

> Their territory included the Middle and North Forks of the Chandalar River and the headwaters of the Koyukuk River. Like the Chandalar Kutchin [the Netsi] the Dihai were in contact with the Eskimos, who gradually encroached upon the Dihai Kutchin, and forced the surviving Indians to take refuge in the Chandalar Kutchin territory, where they intermarried with the latter people. The Eskimo settlements of "Little Squaw" on the North Fork of the [Chandalar] River are said to be in the heart of territory formerly inhabited by the Dihai Kutchin.
>
> (McKennan in Will and Hotch 1982, 11).

Clark (1975, 152) notes that Dihai Kutchin speakers " . . . lived to the northeast of the Koyukon, partly on the North Fork of the Koyukuk . . . ." In Thompson (1972, 6), McKennan describes Coldfoot as being "in the heart of territory formerly occupied by the Dihai Kutchin." According to this same source, these people had moved east to the Chandalar Kutchin region (the East Fork of the Chandalar River) by the 1870s or 1880s (Thompson 1972, 6).

According to Brown (1988, 1:57), the Dihai Kutchin (as well as the Netsi Kutchin to the east) survived by hunting big game, and by fishing in upland lakes in the winter months. Apparently it was a decline in caribou populations to the west and north in Eskimo territory that caused the Eskimos to move into the Dihai Kutchin territory:

> In contrast to the enduring trading partnerships that encouraged peaceful Koyukon-Eskimo relations, increasing competition between the Dihai and Eskimos over caribou hunting sites in the mountains led to war. Old battlegrounds and stories tell of bloody encounters and raids throughout the central mountains as the Eskimos pushed eastward and southward. About 1850 an epic battle near Anaktuvuk Pass ended in defeat for the Dihai. The Endicott Mountains became Eskimo territory.
>
> (Brown 1988, 1:57).

Archeological studies performed prior to the construction of the pipeline found seventeen sites across the Middle Fork of the Koyukuk River from Wiseman. One study noted:

> The number of sites discovered within the limited area examined indicates that the Wiseman area was definitely important to man in the past, probably due to the presence of migratory big game.
>
> (Will and Hotch 1982, 10 (from Dekin in Cook)).

A Wiseman resident told me to watch for signs of the earlier human inhabitants as I traveled around the area, as he had found tree stumps likely cut with a stone axe.

The Nunamiut Eskimos, nomadic until 1920 (Mathews 1990, 21) mainly traveled through the lands to the north and west of the Wiseman study area (Mathews 1990, 23 and Spearman 1979, 43). As noted above, there was probably contact between some Nunamiut and Dihai Kutchin people. Whalers along the Arctic coast introduced diseases, rifles, alcohol, and trade goods to the Nunamiut (Spearman 1979, 51-52). Additionally, between 1860 and 1920 there was a severe decline in the western Arctic caribou herd (Burch 1972 in Spearman 1979, 52), the major food source of the Nunamiut. These influences extensively disrupted the social structure and economy of these people:

> In the wake of a shattered economy and a fragmented social order, the Nunamiut, who abandoned their traditional range, seemingly scattered

> themselves to the four winds . . . a few families moved inland to the south to non-Eskimo villages such as Beaver, Wiseman, Bettles . . .
>
> (Spearman 1979, 52-53).

By this time, "1920 or shortly thereafter" (Spearman 1979, 52), Wiseman was already established as a thriving mining community. This served to attract the Nunamiut, as well as other Eskimo groups such as the western Kobuk and Selawik Eskimo, to the mining camps.

The region along the Koyukuk River to the south-southwest of the Wiseman study area was and is inhabited primarily by the Koyukon people, an Athabaskan group (Arundale and Jones 1989, 150). The Koyukuk River is one of the three culturally and geographically defined divisions of Koyukon Athabaskans noted by Clark. According to Clark:

> It is unknown when the Koyukon first inhabited the Koyukuk drainage. They may have lived there for several millenia or perhaps only a few hundred years. It is interesting, however, to note they, unlike many other Northern Athapaskans, have no migration legends and they believe they have 'always' lived there.
>
> (Clark 1975, 176).

Even prior to contact with non-Natives, the population along the Koyukuk River was not exclusively Indian: Eskimos with "ancestral ties" to Anaktuvuk Pass, the Kobuk River, and the Noatak River also inhabited the region (Clark 1975, 149).

Clark characterized the area as a "marginal subsistence region" where "a great deal of time was spent in food-getting activity" (Clark 1975, 162). In a study of Koyukon Indians and Nunamiut Eskimos inhabiting the region in and around Gates of the Arctic National Park (Nelson, Mautner and Bane 1982, 7), Nelson characterizes the "subsistence economy" in the region:

> If any single characteristic dominates subsistence economies of the Alaskan interior, it is instability. This results from two environmental factors: (1) frequent, pronounced changes in population levels of resource species and (2) irregular spatial distribution of these species. Thus, people who follow a subsistence livelihood face constant shifts in the availability of resources as these populations rise and fall. Subsistence users are compelled to travel widely over the terrain to locate and utilize specific resource places.
>
> (Nelson, Mautner and Bane 1982, 201).

Through the years annual activities and movements included spring hunting and trapping camps, fish camps, berry picking, and hunting activities after break-up and through the summer, fall fishing and hunting camps, winter movement into villages, trapping, and visiting in mid-winter (Clark 1981, 588-589). Traders " . . . went on trips to the Brooks Range or to the Kobuk and Selawik rivers to trade with the Eskimos, or to villages of the Upper Yukon division . . . " (Clark 1981, 589). Trading to the east was apparently forestalled by relations with the previously mentioned Kutchin:

> Prior to 1838 the Koyukuk also were engaged in internecine raiding with Kutchin speakers to their east -- a situation which continued until well after 1851 and precluded Koyukuk traders from obtaining goods directly from the Hudson's Bay post at Fort Yukon.
>
> (Clark 1975, 176).

As a result of such factors as the establishment of a mission and store at Allakaket, and schools, medical facilities, and wage employment becoming available at some locations, "[t]he final shift [of Koyukon Indians] from a semi-nomadic, through a semi-sedentary, to a sedentary life became complete by 1956 . . . " (Arundale and Jones 1989, 151).

Prior to this, the gold discoveries on the upper Koyukuk had already caused the movement of some Native families upriver, into the Wiseman study area:

> . . . during the gold rush others [Native families from Koyukon bands] . . . moved north to the village of Bettles, . . . or even further north to Wiseman and other gold mining camps to seek employment.
>
> (Clark 1975, 156).

Wiseman, then, was a community which drew Koyukon Indians from downriver, as well as Nunamiut, Kobuk, and Selawik Eskimos from the north and west. These people lived and worked along with the community's white miners. This provided Wiseman with a multiracial social structure in its early years. Marshall spoke of Wiseman as a place where " . . . two such divergent races as the whites and the Eskimos are actually living together in almost perfect amity." (Marshall 1933, 230).

## C. Wiseman's Origins as a Population Center

Lt. Henry T. Allen and Pvt. Frederick W. Fickett are reported to be the first white people to visit the Koyukuk drainage. Hiring Koyukon Indian guides, Allen and Fickett portaged from the Yukon River overland to the Kanuti River, and from there moved upstream to the Koyukuk in 1885 (Brown 1988, 1:81, 1:83). During the next seven years, a few white gold miners apparently made it up into the Koyukuk region (Marshall 1933, 30). According to Cole and Sherwood (in Brown 1988, 1:146):

> . . . a pattern emerged of single prospectors and scattered mining partners testing the streams and bars of the main Koyukuk and its South and Middle forks. A few small strikes were made, enough to keep a cadre of 20 or 30 men looking further.

Gold was struck in 1893 on Tramway Bar (Brown 1988, 1:149), about 27 miles downriver from present-day Wiseman. Gordon Bettles, founder of the supply center

of Bettles in 1899 (Marshall 1933, 31-32) and of the "Yukon Press," promoted the area cautiously: "The Koyukuk looks promising, but it is not a place of easy riches." (Brown 1988, 1:152). In 1898, however, the Koyukuk became an alternative destination for the Klondike gold stampede:

> Out of the Klondike's combination of too many people and too few claims, Canadian restrictions, and the breakdown of transportation and supplies [routes] would be fashioned the overflow stampeders to the Koyukuk and the Kobuk in the summer of 1898.
>
> ("Yukon Press" (1897 or 1898) in Brown 1988, 1:157).

About 200 of these 1898 miners made it north of the Arctic Circle (Marshall 1933, 31). The first "real money" struck in this country was found on Myrtle Creek the next summer, in 1899 (ibid.). Myrtle Creek is located to the east of present-day Coldfoot, and empties into Slate Creek. Slate Creek empties into the Middle Fork of the Koyukuk River (Map 2). Emma Creek, the site of another gold discovery, empties into the Middle Fork about five miles upstream from Slate Creek. Bettles, located between 60 and 80 miles downriver, was the closest trading center for these claims on Tramway Bar, Slate, Myrtle, and Emma Creeks. A closer supply center was needed (Marshall 1933, 39). The town of Slate Creek was established at the mouth of Slate Creek. Marshall describes how this settlement came by its current name:

> In the summer of 1900 one of the waves of green stampeders got as far up the Koyukuk as this point, then got cold feet, turned around, and departed. This incident was enough to change the first, unromantic appellation of the settlement to Coldfoot. The real boom in Coldfoot did not come until the next year when both the Northern Commercial Company, the great trading organization for all Alaska, and William Plummer opened stores.
>
> (Marshall 1933, 39).

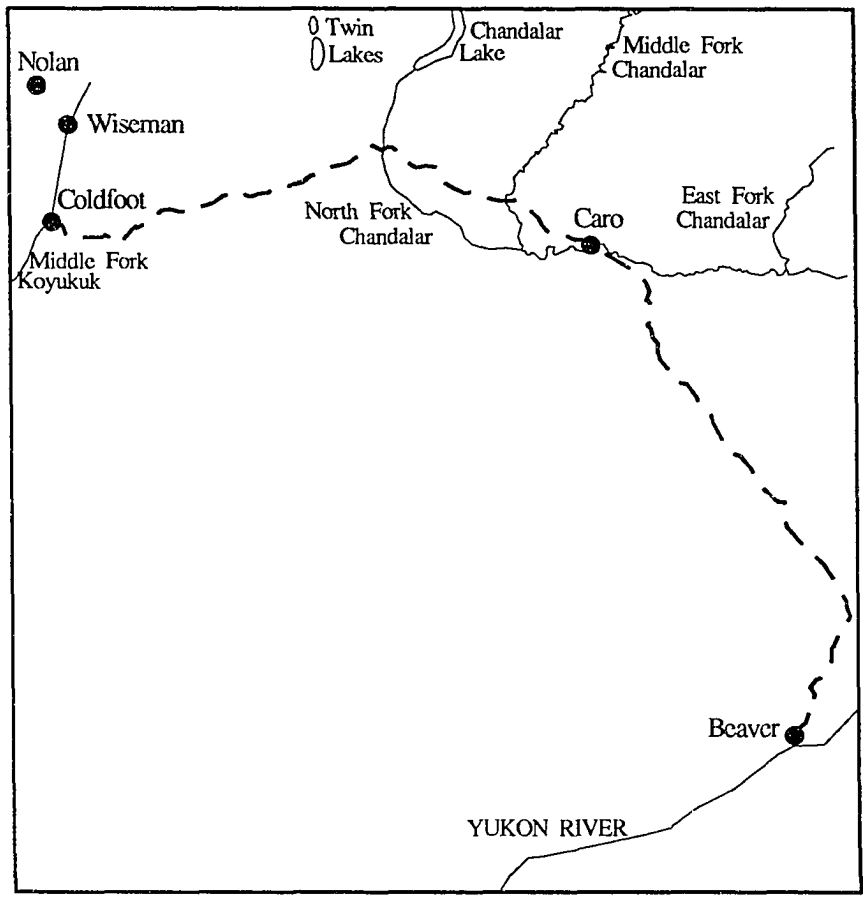
Prior to the 1907 discovery of gold at Nolan Creek (Marshall 1933, 41), the Chandalar country, occupying the eastern part of the study area, was rising in popularity as a mining region (ibid.). Miners were able to travel to claims in the Middle Fork drainage via the Koyukuk and Yukon River waterways. In contrast, overland trails connected the Chandalar region to Beaver on the Yukon River, and to Coldfoot and Wiseman on the Middle Fork (Map 4, from the 1924 Alaska Road Commission Map, Brown 1988, 2).

In the early 1900s, the upper Koyukuk region was on the dog sled route of Archdeacon Hudson Stuck. Calling this region the "Koyukuk camp," Stuck describes in detail the opportunities and constraints attendant to the mining economy of the region from 1900 to about 1910:

> On the middle fork of the Koyukuk, at the mouth of Slate Creek, Coldfoot sits within a cirque of rugged mountain peaks, the most northerly postal town in the interior of Alaska, the most northerly gold-mining town in the world, as it claims. It sprang into existence in 1900 and flourished for a season or two . . . Ever since its start the Koyukuk camp has steadily produced gold and given occupation to miners numbering from one hundred and fifty to three hundred, but the scene of operations, and therefore the depot for supplies, has continually changed. In 1900 the chief producing creek was Myrtle, which is a tributary of Slate Creek, and the town at the mouth was in eligible situation, though much overbuilt from the first. Then the centre [sic] of interest shifted to Nolan Creek, fifteen miles farther up the river, which is a tributary of Wiseman Creek, and the town of Wiseman sprang up at the mouth of that creek. The post-office, the commissioner's office, and the saloon, the stores and road-houses, migrated to the new spot, and Coldfoot was abandoned. Now the chief producing creek is the Hammond River, still farther up the Koyukuk . . .
>
> There has never been found a continuous pay-streak in the Koyukuk camp. It is what is known as a 'pocket' camp. Now and again a 'spot' is found which enriches its discoverers, while on the claims above and below that spot the ground may be too poor to work at a profit; for ground must be rich to be worked at all in the Koyukuk. It is the most expensive camp in Alaska, perhaps in the world. This is due to its remoteness and difficulty of

MAP 4

OVERLAND TRAIL CONNECTING THE CHANDALAR REGION TO THE YUKON AND KOYUKUK DRAINAGES




Overland Trail

1:1,300,000

> access. Far north of the Arctic Circle, the diggings are about seventy-five miles above the head of light-draught steamboat navigation, and more than six hundred miles above the confluence of the Koyukuk with the Yukon. . . . The very smallness of the camp is a factor in the high prices, for there is not trade enough to induce brisk competition with the reduction of rates that competition brings.
>
> Yet the smallness and the isolation of the camp have their compensations. There is more community life, more *esprit de corps* amongst the Koyukuk miners than will be found in any other camp in Alaska. Thrown upon their own resources for amusement, social gatherings are more common and are made more of, and hospitality is universal. (Emphasis in the original)
>
> (Stuck 1914, 47-49).

Wiseman had become the trading and social center for the miners on both Nolan Creek and the Hammond River:

> More gold was recovered from Nolan Creek and its tributaries in four years than had been taken from the entire Koyukuk in all the years before that. Then, just as the riches of Nolan Creek commenced to wane, Verne Watts finally located the deep channel of Hammond River in the spring of 1911. During the next five years over a million dollars came out of this valley. Food, clothing, machinery, and whiskey were unloaded for both of these diggings at the site of Wright's old roadhouse at the mouth of Wiseman Creek (commemorating a transient prospector who stopped a few minutes to pan its gravels and perpetuate his own name). A new town first called Wrights, then Nolan, finally Wiseman sprang up at this point. Meanwhile Coldfoot lost ground steadily until twenty years later there were only mice and ptarmigan to hear the winds go howling down the valley of the Koyukuk.
>
> (Marshall 1933, 42).

According to Thompson (1972, 28):

> Wiseman was the largest center of trading and activity during that period. The town was flourishing in 1916 with several businesses, 320 residents, a school, and a post office. It was not the residence for the hundreds of miners, but was the trading center, post office and more or less the 'cultural center of the area.' Mining men came to Wiseman to enjoy the whiskey, the women, and whatever luxuries the town had to offer them. Wiseman continued to be the hub of the Upper Koyukuk area into the

> 1920's and 1930's even though the population had decreased. (Underlining in the original).
>
> (Thompson 1972, 28).

Wiseman was thus established as a mining camp supply and service center. It was located close to the main area of diggings in the Koyukuk drainage, as well as being relatively close to mining activities in the Chandalar country. Gold in the region attracted white miners to the area, while Native Indians and Eskimos were attracted by the possibility of work and the benefits of community life.

## D. Wiseman as a Regional Transportation, Communication, and Schooling Center

Much of the activity in Wiseman focused on communication and connection to the world outside the region. The transportation of supplies to, and of mail and people to and from, the area was always of primary importance to the region. Marshall (1933, 117-118) gives an example of a summer journey of freight to Wiseman: by steamship from Seattle, Washington to Seward, Alaska; by rail from Seward to Nenana; by steamboat from Nenana down the Tanana River to the Yukon, then down the Yukon to Nulato where it would then be transferred to a shallow-draft steamboat for the voyage up the Koyukuk River to Bettles. In Bettles, the freight would be transferred to horse-drawn scows, which were shallow enough to carry the supplies to Wiseman. Dog teams were the primary method of winter transportation in the upper Koyukuk region (Marshall 1933, 118-119).

Radio came to Wiseman in between 1923 and 1925, when Joe Ulen of the Army Signal Corps set up a station (Ulen 1983, 82-84; Brown 1988, 1:338). This wireless station was requested by petition of Wiseman residents in 1918:

> The great retarding factor in the present and future development and advancement of this great North Region is the lack of adequate and speedy communication with the outside world . . .
>
> (Wiseman residents in Brown 1988, 1:338).

Wiseman then became a radio communication center for the Arctic:

> Joe acted as a relay station because in those days they couldn't get reception across the Brooks Range between Barrow and Fairbanks. Everything went through Wiseman, and we felt as if we were sitting on top of the world with the news.
>
> (Ulen 1983, 84).

This radio link was important until 1955, when more powerful stations began to operate between Barrow and Fairbanks (ibid.). Marshall described other important functions of the wireless station in Wiseman:

> This was almost essential to make the use of the airplane practical, for without some method of communication with Fairbanks it would be impossible to order a plane when it was needed. The wireless is also used for sending weather reports, for ordering goods from Fairbanks, and occasionally to get medical advice from the doctors at Fairbanks, Tanana, or Fort Yukon.
>
> (Marshall 1933, 135).

The first airplane in the region had arrived on a gravel bar in front of Wiseman on May 11, 1925 (Marshall 1933, 132 and Ulen 1983, 85). The high prices for air freight initially limited the supplies that were flown in (Marshall 1933, 134). However, access to Wiseman had now changed: " . . . civilization in an emergency was no longer three weeks to three months away, but only a matter of two or three hours" (Marshall 1933, 133).

Wiseman residents contributed their own money and labor toward construction of the first airstrip in 1926 (Brown 1988, 1:388-389). An improved strip was constructed in 1930 (Ulen 1983, 86). Dr. Walter Johnson, co-owner of the Wiseman Trading Company from 1944 until 1991, said that in the 1940s air freight had replaced surface transportation (Johnson 1992). He remembers DC3s, capable of hauling several tons of freight at one time, landing at Wiseman in about 1947 (ibid.).

Prior to the extensive use of air freight, however, a caterpillar tractor known as "The Cat" made its debut in the Wiseman area. It arrived in 1929, initially to haul winter freight from Bettles to Wiseman (Marshall 1933, 135). As Walter Johnson pointed out, however, this labor-saving power machinery had a significant economic impact on the area:

> Teamsters, dog-sled freighters, wood haulers, and mine laborers lost their jobs to the machine. And most of the money grossed by the Cat went outside for imported fuel. So the net result was fewer jobs and less money in the community.
>
> (Johnson 1984 in Brown 1988, 1:390).

"The Cat" still sits in Wiseman today.

Joe Ulen facilitated radio communication with many pilots during the World War II period (Ulen 1983, 87). Air traffic to and from Wiseman apparently decreased with the opening of Bettles Field. Bettles Field began operation in 1945 as a U.S. Navy support center for exploration of the Naval Petroleum Reserve #4 on the North Slope (Marcotte and Haynes 1985, 19). It was World War II that apparently put gold mining "out of business" in the area. As young miners left to become part of the armed forces, machinery was pulled out of the area (English 1992). Since gold mining was not considered essential to the war effort, the mining economy of the region declined (Brown 1988, 1:392).

Despite the fact that mining activity in the area declined, which precipitated a drop in the area's human population, Wiseman itself refused to become a ghost town. In 1919, local residents had been successful in getting a school authorized and built in Coldfoot. This school stayed open until 1924, when it was closed due to insufficient student enrollment (Brown 1988, 1:342, 345). In 1927 the region's school reopened in Wiseman, and in 1928 the old Coldfoot school house was dismantled and moved to Wiseman (Brown 1988, 1:347). The people who currently live in this cabin told me that you can still read some of the numbers that were written on the logs to aid in the reconstruction.

The school remained open in Wiseman until May 1941 (Brown 1988, 1:498). As Tishu Ulen commented: "The school stayed open until the 1940s, when everybody took off for Fairbanks, and the village seemed deserted" (Ulen 1983, 77). Although there were 15 children under age 18 during the 1992-1993 study period, Wiseman still does not have a school. Currently, Wiseman residents are seeking to have a school re-established in the area. As was previously mentioned, the time commitment needed for home schooling is an important element of the local lifestyle.

## E. The Mixed Subsistence/Cash Economy of the Wiseman Area

The historic literature notes that the ability to provide for food, clothing, and shelter was central to any ongoing activities in the Wiseman area. Marshall (1933,

164-165) uses the title "Living Off The Country" to head his chapter discussing renewable resource use in the Wiseman area:

> If it were not for living off the country, civilization on the Koyukuk could not survive today. The $27,000 in gold taken out of the ground during the past year would obviously be insufficient to support the 127 people with the high prices they have to pay, were it not for the additional subsistence provided by the animal and plant life of the region. These biological resources are made available through hunting, trapping, fishing, berrying, logging, and gardening.
>
> (Marshall 1933, 164).

It appears that the mixed subsistence/cash economy of the region was prevalent for all inhabitants, regardless of race, and that this mixed economy provided for a " . . . more comfortably blended Native-white society than that found in most parts of Alaska" (Brown 1988, 1:352):

> . . . the general life-style in the far north camps and communities allowed little distinction between natives and whites based on wealth or hierarchies of work. Particularly after 1915, most people lived pretty much alike, combining cash and subsistence economies to make ends meet. Moreover, the upper Koyukuk mining area lacked the wealth of furs, which, in richer places, segregated Natives into a fur trapping-subsistence economy. In sum, sparse population and marginal resources drew Natives and whites together in a mutually supportive blend of life-style and labor. Isolation buffered change, slowing and diluting the directed change of outside agents--giving Native people the chance to pick and choose, to balance change with ongoing elements of traditional life . . . they [Natives] could take jobs with the whites, or they could hunt and fish, or they could do both.
>
> What emerged was an upper country society in which social distinctions between Natives and whites were not absent, but were muted because of continuing interdependence, including frequent intermarriage. Many Natives became proficient workers, and some became partners with whites, in mining, transportation, and mercantile enterprises. At the same time, because these 'imported' activities occurred seasonally or at marginal levels and could not sustain families year-round, traditional hunting and fishing expeditions kept families close to the land. Children, accompanying their

> parents, learned traditional ways of travel, harvest, and survival. Thus recruited, they carried on those traditions.
>
> (ibid., 1:350-352).

Apparently, some people were more active in cash producing activities, mainly mining, and some were more active in non-cash producing activities. Marshall noted that " . . . nobody makes his living in only one way." (Marshall 1933, 101).

Tishu Ulen (1983, 48) remembers her early years in the Chandalar and Wiseman country: "My father was a good Eskimo hunter who had to travel through much of the country to find game." "Hunting was the most important part of our lives because from hunting came not only our food but clothing and dog food and tools from bone" (Ulen 1983, 60). Ace Wilcox, a non-Native Wiseman old-timer, was known more as a market hunter and gardener than a miner: "Ace was an early meat hunter, often traveling great distances to obtain game. During the summer months, the meat was stored in an ice cave dug into the permafrost in the riverbank across from the village" (Johnson 1983, 118). Ace's garden was apparently well tended by Charlie Breck, and is still obvious outside the cabin today. Margaret Murie ran into Fred Swift, a "famous hunter" and miner on her way from Bettles to Wiseman in 1924 (Murie 1957, 160). He told Mrs. Murie: "Winter mining is too expensive for most of us; winters I just go off trapping and prospecting" (ibid.). Bill English remembers Jess Allen and Ken Harvey, two white miners, as being sheep hunters who would sell their meat (1992).

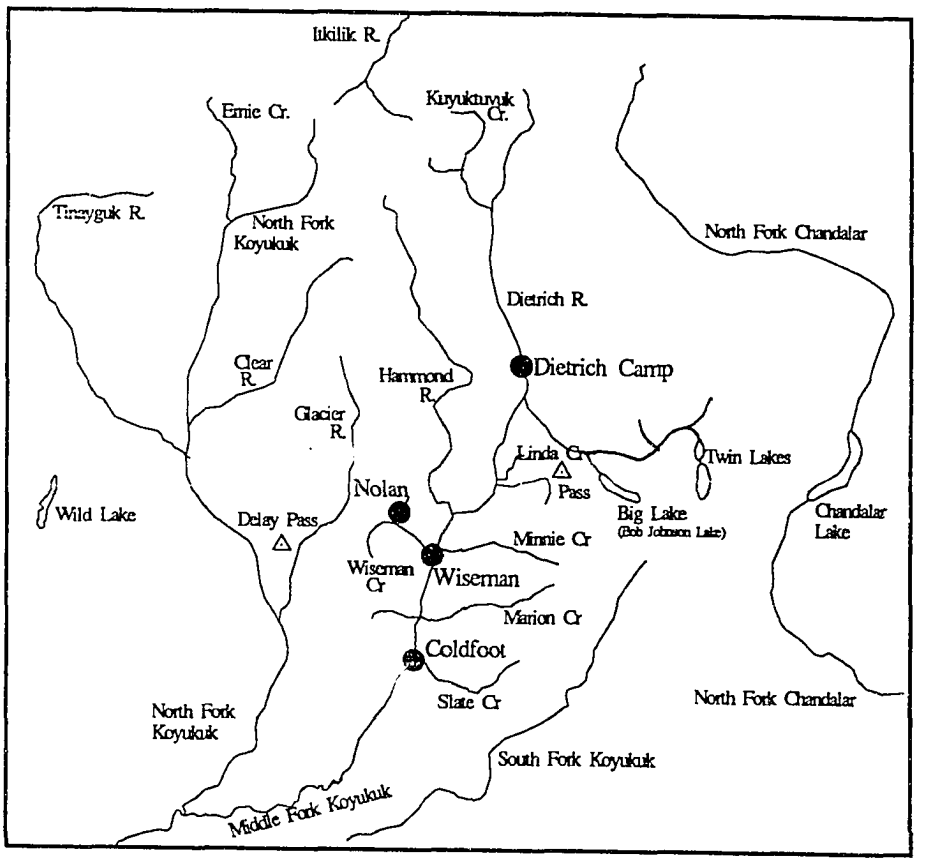
Mamie Boese, a Kobuk Eskimo who lived in and around Wiseman from about 1922 to 1928, then returned to the area in the 1960s, said that people would hunt moose anywhere they could find it, and then sell some of it. Laws did not prohibit the sale of game meat at the time. Tishu Ulen (1983, 92) remembered her father

taking fresh meat to the Coldfoot store, probably to sell or trade. Selling game meat to the miners and trading it at the store would provide a few dollars for flour, sugar, baking soda, rice, and beans (Boese 1992). Mrs. Boese claims that all prospectors and miners had to live off the country, not off the store (ibid.). Arctic John Etalook, an Ulumiut Eskimo who spent the 1950s to 1960s in the Wiseman area, used to sell Dall sheep and furs to prospectors in Wiseman (Etalook Transcripts, Spearman 1984).

The areas used for harvesting renewable resources in previous years appear to be similar to the areas currently utilized by Wiseman residents. Map 5 illustrates the location of physiographic features noted in the following discussion. Arctic John would travel by dog sled between Wiseman and Anaktuvuk Pass (Etalook Transcripts, Spearman 1984). Trembley and Nutirwik Creeks, the Sukakpak area, Big Lake, Twin Lakes, and the Linda Creek-Linda Creek Pass areas are noted in these transcripts and maps as areas Arctic John used to harvest resources (ibid.). Another individual remembers Arctic John looking for sheep up on Midnight Dome near Wiseman, and hunting in the Hammond River drainage, behind the Wiseman Cemetery, and down towards Coldfoot. Arctic John's adopted daughter apparently hunted Dall sheep in the mountains bordering the Middle Fork valley.

Turak Newman, an Eskimo from Barrow (Newman 1978, 3) was also familiar with utilizing the land and renewable resources in the Wiseman area, and with making use of services that Wiseman provided. In 1906, Mr. Newman remembers wintering on the North [Middle] Fork of the Koyukuk:

# MAP 5
## PHYSIOGRAPHIC FEATURES IN THE WISEMAN AREA



> Then we hit the North Fork of the Chandalar, came over the divide and then went over to the North Fork [probably meaning what is now known as the Middle Fork] of the Koyukuk. There is a lot of game there, so we wintered on the timber line. We built an igloo, and off and on Frank [Yasuda] came up. We had a lot more game than we needed. Frank generally took, oh, a couple of sled loads down to the miners at Wiseman and Coldfoot. There were a few people there at that time. He traded it off for flour, sugar, rice, and tea. That is the way he kept us in supplies.
>
> (Newman 1978, 9).

In 1917, Turak Newman and a companion traveled overland from Beaver to Barrow to reestablish ties with relatives (Newman 1978, 29-30). The duo stocked up on supplies in Wiseman:

> Then we went up to Wiseman. That is where we were going to outfit for the trip to Barrow. That is eleven miles above Coldfoot and they had a big store. So we started from the roadhouse and we stayed at Wiseman for three days to make sure that we hadn't forgotten anything for the trip. Then we left for the big trip to Barrow. No more stores between Wiseman and Barrow.
>
> (Newman 1978, 32).

Mrs. Boese noted that the people of Anaktuvuk Pass utilized resources in the area to the west of the Middle Fork of the Koyukuk, so her family went east. They would walk up Linda Creek, and go over Linda Creek Pass (known as "the Summit") to Big Lake, come out at Coldfoot, then go back upstream to Wiseman (Boese 1992). Mrs. Boese also noted that they would walk, dogsled, and dog pack over to Twin Lakes, and also fish on the North Fork of the Chandalar River and South Fork of the Koyukuk River. Mrs. Boese noted that "people went anywhere they might know of to get game" (ibid.). An individual who has known Wiseman since 1955 remembers Tishu Ulen telling her about going to Big Lake and Wild Lake to get fish. This individual used to hunt in the summers when her family lived in Wiseman, but they were confined to areas they could walk to for hunting and fishing. Sheep hunting on

Vermont Dome was a memory that stood out in her mind. An individual who has known the area since 1964 recalls hunting in the Glacier River, Vermont Dome and Grotto Mountain area, as well as on the North Fork of the Koyukuk. He fished on the Hammond River, North Fork of the Koyukuk, and at a lake in Delay Pass. A lot of sharing of harvested resources occurred in Wiseman, especially among the Native population (English 1992).

Contemporary trapping areas also appear to be similar to those trapped in past years. An individual who still lives in Wiseman for part of the year remembers the local trapping areas as being "up the North Fork [of the Koyukuk], up in the Nolan area, north to Dietrich, and over towards Chandalar" when he lived in Wiseman and attended school there in the 1930s. Tishu Ulen trapped in the area near Wiseman. She noted that her trapline "ran up Jennie Creek" (Ulen 1983, 89). Mrs. Boese used to run traplines north and south in the area. One individual who has visited the area since 1964 recalls lots of trapping being done by locals in the 1970s. Ross Harry, a Wiseman resident, was trapping on the Glacier River and on the North Fork of the Koyukuk at this time. Apparently Ross Harry and his wife Peggy built "Peggy's Cabin," a trapping cabin which stands on a bank above the North Fork of the Koyukuk. A Wiseman cabin owner who no longer lives in the community said he used to trap in the Dietrich-Bettles River-Twin Lakes area. He said he also took his dogs and walked over to hunt on the Glacier River.

Over the decades, old-timers have passed on, young people have grown, and some new people have moved into the area. However, many of the activities relating local people to the land and renewable resources continue. Knowledge is passed down in stories which provide a connection from past through present, and on into the future

generations of Wiseman. Children are now listening to the stories the locals tell, and are being taken out on the trail to gain skills and knowledge. The continuity of a lifestyle is apparent. In speaking of the Wiseman area, Brown noted:

> The postwar generation of newcomers represented the third wave of Koyukuk miners and settlers. The stampeders of the '98 Gold Rush and the first years of the century had been the first. Then came the people of the Teens, Twenties, and Thirties. Despite Marshall's forebodings, enough old-timers survived into the Forties and Fifties to pass on the essential traditions of the country, and in time even the postwar generation would join the parade of pioneers. These are the people who overlapped much of the past. They and the more recent immigrants they have tutored remember the historic people and places . . . studies that follow . . . owe much to the memories of these latter-day survivors and recruits.
>
> (Brown 1988, 1:504)

## F. Change in the Area: Community Impacts of Haul Road Construction

Prior to the oil pipeline/Haul Road construction era of 1974 to 1976 (Milne 1993), Dr. Johnson characterized the Wiseman area as very quiet and pleasant, the residents being either those who chose the quiet life, or elderly miners who did not have enough money to leave (Johnson 1992). Many of these miners apparently had a $65 a month pension (ibid.). One non-resident Wiseman property owner thinks of the construction of the Haul Road as the "hugest" change that they know of in Wiseman. When the road opened to local traffic in 1976 (Milne 1993), it apparently was a "tremendous shock" to Wiseman residents. A metal house trailer hauled in to the community apparently looked very much out of place beside an old-timer's cabin.

The trailer served as a reminder that a "new age" had come to Wiseman (quotes all from the previously noted property owner). A state DOT camp was established at Coldfoot in 1978 (Milne 1993), increasing the population of the area. Original plans called for this camp to be located on the state airstrip in Wiseman (Stueller 1993). Apparently one Wiseman old-timer did not want maintenance equipment to be continually crossing his land, which lay between the airstrip and the access road into Wiseman (ibid.). A current resident also remembers that the BLM would not issue a permit to the DOT, as construction of the camp would occur at least in part on land that had been selected for a Native allotment.

Wiseman apparently developed a reputation for being unfriendly to the "pipeliners," the people who worked on the construction of the pipeline and Haul Road. One difficulty mentioned was that of trespass: "When the pipeline and [H]aul [R]oad were approved, there was a renewed interest in the Koyukuk. Souvenir seekers thoughtlessly came through and picked up what artifacts they could find around the old cabins" (Johnson 1983, 120). One incident recounted to me by several individuals was that of shots being fired by a Wiseman resident in the direction of a helicopter used in connection with pipeline operations.

George Lounsbury, a Fairbanks resident with strong ties to Wiseman old-timers, noted that many people during pipeline construction days used Wiseman as a mail drop (Lounsbury 1992). The Wiseman post office closed down in 1956 (Cain-Schmitt 1993), and Lounsbury recalls Charlie Breck's cabin being "stuffed with mail" as Charlie was Wiseman's unofficial postmaster (Lounsbury 1992). Prior to Charlie's assumption of the task, mail used to be dropped off at the airstrip in Wiseman in separate bags (ibid.). There were two factions in Wiseman who were "enemies"

(ibid.), and did not want the other faction to handle the mail. Apparently the reputation of "unfriendliness" also applied within the community among certain individuals.

When the state took over maintenance of the Haul Road, several Wiseman residents were apparently hired to work on the road. Employees evidently had to provide their own housing, but now the mostly non-local state workers live in state camps provided for them by the DOT. The impacts of the creation of Gates of the Arctic National Park and Preserve were not felt until later. Current residents say they do not remember any sudden changes to their harvesting activities in either 1978 (the year of National Monument designation) or 1980 (the year of National Park and Preserve designation). Two individuals noted that they were not immediately aware that land management changes had occurred in the area.

## G. Human Population Dynamics: A Summary

Marshall records the permanent white population of the upper Koyukuk region as ranging from 200 in 1898 to 71 in 1931 (Marshall 1933, 37-38). He describes three major reasons for the decline in human population of Wiseman and the upper Koyukuk:

> After 1916 three things happened. The richest claims both on Nolan Creek and Hammond River were mined. The high wages of the [First] World War period attracted many of the most energetic men to the Outside. Prohibition went into effect, and the freely flowing whisky which had been to many such an important feature of the life in the Koyukuk was over.

> Consequently, population and gold production both declined almost uninterruptedly.
>
> (Marshall 1933,43-44).

Although Wiseman is listed as having a population of 58 in 1930 (Rollins 1978, 1930-5) and of 53 in 1939 (ibid., 1940-6), the population of Wiseman continued to decline. Alaska Census figures for 1950, 1960, 1970, and 1980 do not list Wiseman, as the census covers cities, towns and villages, incorporated and unincorporated, that have a population of twenty-five or more (Rollins 1978, 1950-8, 1960, 1970).

Dr. Johnson noted that from 1940 to 1972, Wiseman was in a "period of somnolence" (Johnson 1992). Apparently the town refused to die, as did other mining camps on the Koyukuk such as Arctic City and Bergman (ibid.). Instead, Dr. Johnson recalled, "it just went to sleep" (ibid.). Table 3 portrays the human population in the study area between 1930 and 1992.

**Table 3**

**Wiseman Population Figures, 1930 to 1992**

| Date | Population | Source of Information |
|---|---|---|
| 1930 | 58 | Rollins 1978 |
| 1939 | 53 | Rollins 1978 |
| 1940-1972 | 20-25 max., 8-12 min. | Johnson 1992 |
| 1946 | 24 | Johnson 1992 |
| 1952 | 18 | Thompson 1972,26 |
| 1964 | 10-11 | Wiseman non-resident property owner |
| 1972 | 9 | Thompson 1972, 27 |
| 1974 | 12 | Wiseman non-resident property owner |
| 1990 | 33 | U.S. Census Bureau |
| 1992 | 31 | Scott, field data |

It is hard to determine the degree of transience of these populations, but the old-timers Harry Leonard, Charlie Breck, and Ross Brockman all lived in Wiseman during the 1940 to 1972 time period, and on into the 1980s. According to current Wiseman area residents, a total of eighteen households have moved to and away from Wiseman since 1980. The average length of stay for these households appears to have been about two winters. Family members of four of the current ten households in Wiseman lived in the community prior to 1980, the longest on a permanent basis since 1971/1972. These households collectively represent 71% of the current Wiseman population.

According to Dr. Johnson (1992), the average age of the Wiseman population in 1944 was 65. In 1992, the average age of the Wiseman population that I calculated was about 19. The four households who have resided the longest in Wiseman explained this change in population composition:

> In the 1970s ". . . [the] place was comprised mostly of old-timers with a few kids, and a few younger people, and now it's changed to where the old-timers died off and those kids are now in mid-life and they have big families."

This change in population dynamics from primarily adults, to adults with children, was also described by non-residents who had known the area since the 1960s and 1970s.

Table 3 shows that the community of Wiseman has oscillated from a recorded population of fifty-three in 1939, through a low period of eight to twenty-five in the 1940s through 1970s, to its current population of thirty-one.

## H. Summary

Prior to white settlement, the Wiseman area was inhabited by the Dihai Kutchin, and was in a region of contact between Nunamiut, Kobuk, and Selawik Eskimos to the north and west, and Koyukon Indians to the south. These people survived by harvesting the renewable resources of the area. Wiseman was established in the early 1900s as a service supply center for mining activities in the region, and became the physiographic, economic, and social center for the region's Native and non-Native population.

People survived in the area by combining cash income from mining and selling harvest products with direct utilization of renewable resources. The Wiseman community survived the decline in gold production during World War II, and a few people remained in the area. Construction of the pipeline and Haul Road enabled more people to access the area, and provided a cheaper supply route from Fairbanks. In recent decades, residents have continued to harvest resources in the area.

# V. CONTEMPORARY LIVELIHOODS OF WISEMAN COMMUNITY RESIDENTS

## A. The Seasonal Round: A General Overview

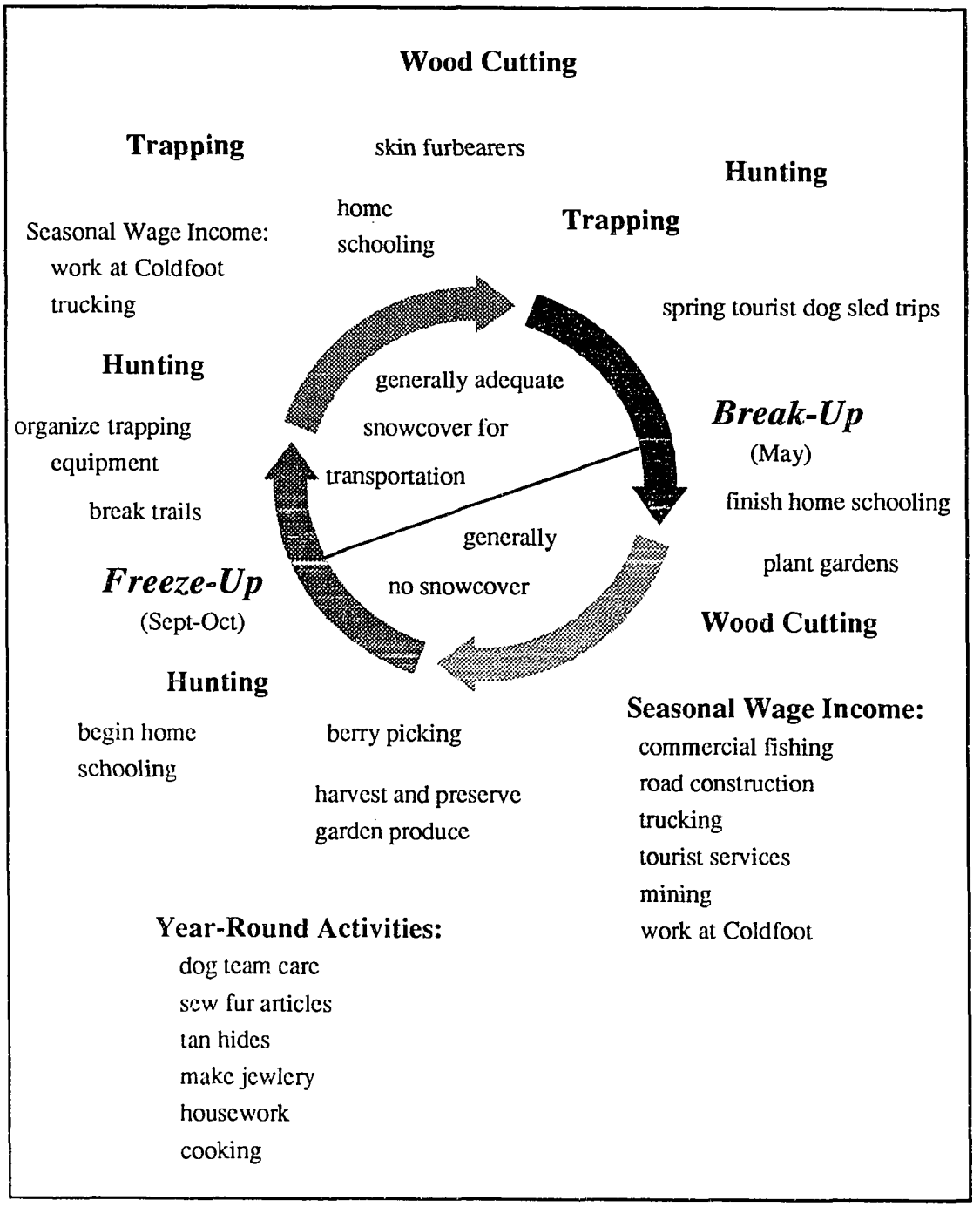
The following description of the Wiseman seasonal round of activities is derived from my observations, conversations, and general experience accumulated during visits to the Wiseman area over the course of a year (1991-1992). Since I did not live continuously in the area during this time, these descriptions may not be complete. Clearly, yearly activities can and do vary.

Land and resource use activities in the Wiseman area appear to be limited by two major factors: the designated harvest seasons for various animal species, and the user's ability to access resources. As mentioned previously, dividing the calendar year into periods between break-up and freeze-up affords a natural division of activity in the area, as this has a major impact on transportation and access.

Freeze-up (Figure 1) is the transition time when preparations for winter are being completed. Any outside construction or repair work and cabin winterization is accomplished before the sub-zero temperatures set in. Snow machines and dog sleds are uncovered and checked over. With the approaching season, trapping households organize equipment, establish trails once there is enough snow cover, and locate traps that have been left out (but not set) in relatively remote areas all year.

**Figure 1**

**Wiseman Seasonal Round, 1991-1992**



Traps are checked regularly throughout the season, which runs from November 1 to February 28 for lynx and marten, and until March 31 for wolf and wolverine in Game Management Unit (GMU) 24, the unit in which Wiseman is located (1992/93 Federal subsistence management regulations, 88). At home in the cabins, attempts are made for the children to continue to complete school lessons every day. Each child is expected to do three hours of school work five days a week in the home schooling program. Child care, housework, taking care of weekly mail, cooking, skinning furbearers, cutting and hauling wood, taking care of dog teams (owned by four Wiseman households), repairing equipment, sewing fur hats, mittens, ruffs, and mukluks, beading earrings and making assorted jewelry from animal parts occupies the days. One household also spends time tanning hides. Individual responsibility for these tasks varies among households.

The two households that run dog sled trips for tourists set up their camps and establish trails (unless they use pre-established trapping trails for this purpose) during mid-winter (February). This tourist season takes place in late winter (March/April) when there is still enough ice and snow for travel, but there are more hours of daylight and temperatures tend to be warmer. Moose, caribou, and both black and grizzly bears may be harvested at this time. Snow melts rapidly in April and May with the long hours of sunlight.

During break-up, residents watch the Middle Fork of the Koyukuk River and Wiseman Creek for possible flooding. Winter overflow from the creek has inundated parts of the community in previous years, and the footbridge across the creek is sometimes in danger of going out with the ice. At this time of year potable water becomes a concern for those four households without wells. The Wiseman spring was reliable year-round until the winter of 1991/1992, when it ceased to flow until

the summer. Water was hauled from a lead in the Middle Fork that winter. However, the river water is silt-laden in the spring, and is thought to be contaminated by anti-dust chemicals carried in runoff from the nearby Haul Road.

Gardens are planted as soon as the snow is off the ground, as the growing season is so short. Household members who commercial fish in Bristol Bay leave in June. Other households also earn cash income in the summer by leaving the area for work, and some find ways to earn cash income in the Wiseman area. Local employment can include Haul Road construction work, while non-local employment in trucking or logging, for example, has been sought. Methods of earning cash income are discussed in section D of this chapter. Summer tourists purchase some items at the Wiseman Trading Company, and in 1992 a "tent camp," primarily composed of road construction workers, occupied the willow flats in front of the store. Some fur articles continue to be made year-round, mostly on order for locals in Coldfoot and the mining camps of the region. Local miners also purchase supplies at the Wiseman Trading Company, and come to the community to use Wiseman's phone. Nolan residents sometimes haul spring water from Wiseman, as waters of the natural drainage system in Nolan are not potable for humans.

In summer, school tends to be suspended. Children play outdoors, and help with household chores. Dog teams must continually be cared for. Towards the end of summer, residents pick berries and make preserves from any berries and garden produce not immediately eaten. The fishing households return from Bristol Bay. Dall sheep and caribou may be harvested in August. Although moose season opens towards the end of August, local residents tend to refrain from hunting moose until about mid-September. By this time, it is usually cold enough to preserve the meat by hanging it outside and allowing it to slowly season and freeze as the temperature

drops. Early fall is an important time for harvesting meat for the winter, including supplies of moose, caribou, Dall sheep, black bear and grizzly bear.

The federal subsistence management seasons for large game species harvested by Wiseman residents in GMU 24 are described in Table 4. Wiseman residents utilize GMU's 25 and 26 to a lesser degree for harvest activities. Map 6 illustrates the location of these game management units. Table 33 compares federal and state seasons in these three units. Timing of harvest activity in the seasonal round are limited by these established seasons. It is difficult to ascertain sequence regarding the regulation of harvest activity: do regulations allow harvest activity that reflects historic harvest practices, or are current regulations limiting harvest activity so that historic harvest activity patterns have been obscured? This question is important in the determination of what activities are "customary and traditional." As is noted in both ANILCA (Sect. 803) and Alaska Statute 16.05.940(32), subsistence uses are in part defined as being customary and traditional.

Yearly activities are also limited by the ability to access the resources. In contrast to times past, the Middle Fork of the Koyukuk is no longer used as a major corridor of summer transportation. Although four Wiseman households own boats of some sort, now the principal year-round access route to and from the area is the Haul Road. One household owns a single engine aircraft and uses it to access a cash-earning job in the summer season, in addition to occasional flights in the Brooks Range. Boats are now used for local fishing trips, occasionally for hunting trips, and for recreational purposes. After freeze-up, however, rivers in the area become the main corridors for transportation, as they were in times past.

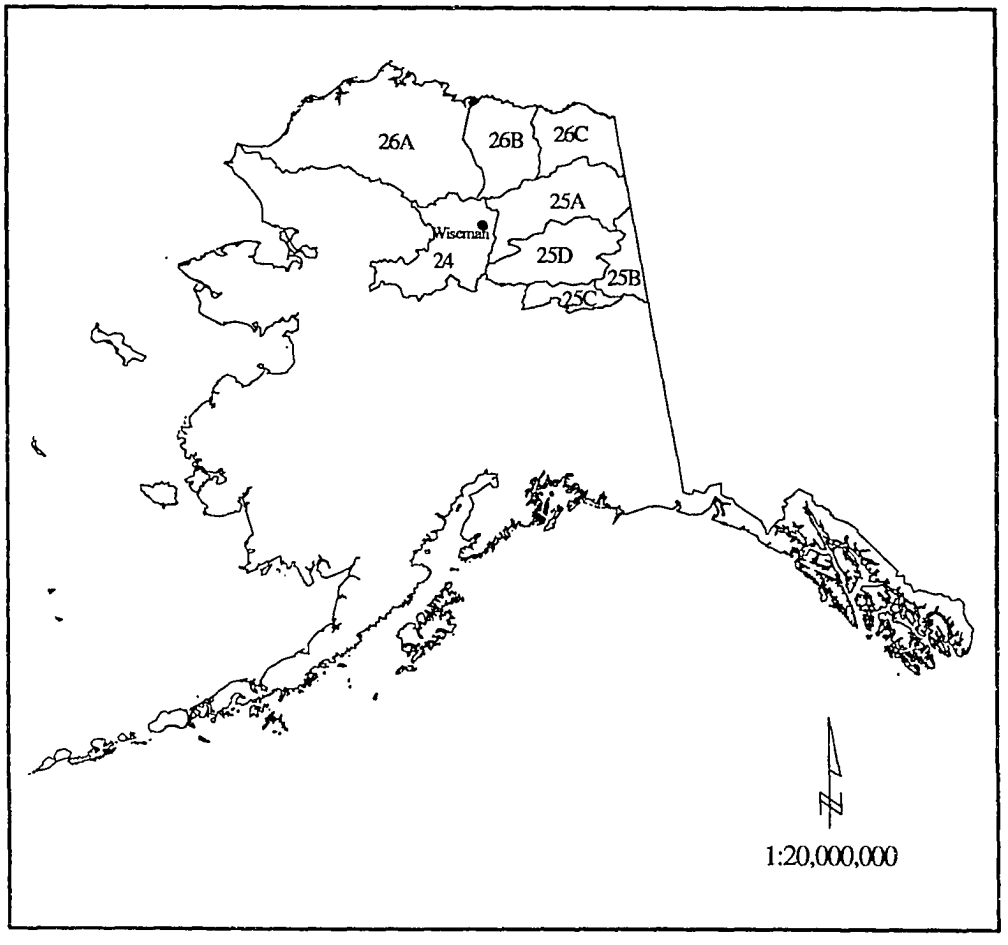
**Table 4**

**Harvest Seasons for Selected Species in Game Management Unit 24: 1992/93 Federal Subsistence Management Regulations**

| Species | Harvest Season |
|---|---|
| **Moose** | Aug. 25 - Sept. 25, in the Wiseman area of the Unit.<br>March 1 - 10 in specific areas of Gates of the Arctic National Park.<br>(Aug. 1 - Dec. 31, Sept. 5 - 25, Dec. 1 - 10, in other specific areas of the Unit). |
| **Caribou** | July 1 - June 30 in the Wiseman area of the Unit.<br>(Aug. 10 - Sept. 30 in specific drainages to the south of Wiseman). |
| **Dall Sheep** | Aug. 1 - April 30 (Gates of the Arctic National Park).<br>Aug. 10 - Sept. 20 (Rest of the Unit). |
| **Grizzly Bear** | Sept. 1 - May 31. |
| **Black Bear** | July 1 - June 30. |

Rivers, creeks, lakes, and hillsides where ground water is near the surface are all subject to "overflow," which can be extremely hazardous to travel. Overflow occurs on rivers and creeks when a section of the channel is blocked by ice. Flowing water is forced onto the surface of the ice, where it resumes its downstream journey until it too freezes, forming a phenomena known locally as "glaciering." Ice layers build up, and can even form impassable ice falls where the overflow is constricted by terrain features. The overflow will often saturate lower layers of any snow pack present on the river or creek. From the surface, this overflow can not always be detected. The snow pack itself will provide insulation for the water, which will not necessarily freeze immediately. Overflow on lakes can occur when the weight of the snow

MAP 6
APPROXIMATE LOCATION OF WISEMAN AREA
GAME MANAGEMENT UNITS



pushes the ice down, forcing water up through cracks or holes in the ice. Also, the ice may settle, creating breaks through which water can seep. On hillsides, seeps and springs will also overflow, icing up nearby slopes and trails.

Travel on rivers and lakes thus has its hazards, but it seems that river corridors are the preferred routes of travel between freeze-up and break-up. Overland travel on trails that are broken out regularly is not uncommon, however. Land travel involves navigation through dense stands of spruce in generally soft and relatively deep snow, while traversing uneven terrain.

In addition to being a determining factor for preferred transportation routes, the general break-up/freeze-up division of the seasonal round also describes the division of methods of transportation in the Wiseman area. Although the times of first and last snowfall accumulation can vary widely, there is often enough snow for snow machine and dog team travel from just prior to freeze-up until just after break-up. This is not to imply that these two natural events are linked in any way. Climactic factors can introduce tremendous variation in any natural system, but it seems that available routes of transportation and available methods of transportation change considerably around the "freeze-up" and "break-up" seasonal designations. Snow machine and dog team travel afford access both on the frozen waterways and across the country on winter trails. Neither method of transport can be used without an adequate layer of snow.

Thin snow cover hampers movement early in the season, and sometimes throughout the season in a year of low snowfall. Travel over rough frozen ground without the cushioning effects of snow takes its toll on snow machines, dog feet, and sleds. In general, people prefer not to risk damage to their equipment or injury to

their dogs by subjecting them to rough traveling conditions. Travel is thus restricted in times of less-than-adequate snow cover.

Mechanized cross country travel after snow melt in the Wiseman area is limited to highway vehicles on the Haul Road, the Wiseman-Nolan road, and the Wiseman-Hammond road. Off-road vehicles are prohibited on land within five miles of the right-of-way of the Haul Road, except for use in mining operations and for oil and gas development activities (Alaska Statute 19.40.210. See Map 2 for corridor boundaries). Both the relative ease and safety of travel, and the method of transportation, are thus linked to and limited by both the regulatory structure and the continental polar climate of the region. Variable local mountain weather patterns also influence the ability to move around the area, and participate in renewable resource use activities.

## B. Renewable Resource Harvest Activities

### 1. Introduction

There can be a wide range of differences in renewable resource harvest levels from one year to the next. This variation depends on various factors. Mobile animal populations fluctuate, producing variation in harvest numbers. Plant populations such as berries vary in crop availability from year to year. Community harvest numbers for any given year may or may not give an accurate indication of the general harvest levels of a species. There is no "typical" Wiseman harvest of the various

species in the strict sense of the word. In order to give the most complete picture possible of renewable resource harvest activities, I have presented here the range of variation in harvest quantities, and the factors that are felt to influence this variation.

When asked for an estimation of average harvest numbers, Wiseman households were unable to provide a single specific number. Residents felt that the concept of harvest averages was an inappropriate way to look at an activity which, over the years, can exhibit major or minor variations. To illustrate, one Wiseman household pointed out that:

> Needs for resources change over time, and the availability of resources can be cyclical in nature. A household does not harvest all resources at once, or in any one given year. The nature of the harvest depends in large part upon resource availability.

In an attempt to obtain figures that may be used to calculate average harvest figures, and to gain a picture of harvest level variation over time, I requested numerical data about specific game and furbearer harvests based on the temporal frames noted in the methodology section of (1) before 1980; (2) between 1980 and 1985; and (3) since 1985. I also sought figures for harvest both inside and outside the area of Gates of the Arctic National Park and Preserve to gain a picture of variation in use area patterns over these time periods. However, such information was not consistently available, despite the fact that residents spent significant amounts of time trying to remember time and space details of harvest. Additionally, information from Wiseman old-timers who used to harvest in the early time periods was not available. It became obvious to me that it would not be possible to obtain even an approximately accurate numerical representation of game and furbearer harvest in such a temporal and spatial context.

Alaska Department of Fish and Game (ADF&G) personnel told me that a search for harvest information in harvest records would require large amounts of time and resources. I was told that harvest information for the small number of Wiseman residents would somehow need to be separated from the larger quantity of harvest data for the appropriate game management units. As Wiseman does not have a post office and its zip code has changed over time, the identification of Wiseman information would be difficult. In addition, the accuracy of such state harvest records would be questionable for the following reasons:

a. ADF&G personnel told me that early state records from the area (pre-1985 in particular) are sketchy at best.
b. Game harvest information, particularly in relation to location of harvest, may not be accurate as the Haul Road corridor was closed to firearm hunting from 1980 to September of 1992 (at which point local residents could use firearms). Wiseman residents pointed out that within this time period, any illegal firearm harvest may have been reported on harvest tickets as occurring in a different location.
c. Wiseman residents also pointed out that furbearer harvest information may not be accurate due to the fact that some Wiseman furs are kept for household use, sold privately, or made into articles. When this occurs, harvest data may not show up in harvest records.

The possibility of attaining a single figure to represent the community's average harvest activity, and the accuracy of such a figure, was therefore questionable.

As noted in the section on research limitations, the question of protection of individual information was brought up repeatedly throughout the data-gathering process. In order to continue the involvement of community residents in the study, I had to report all information on a community level instead of breaking the data down in any way that would associate the information with individuals. Consequently, instead of using the concept of "percent of the households," I provide figures that

represent "percent of the community" responding to questions, or engaging in a particular activity. By using "percent of the community" as opposed to "percent of the households," it is much more difficult to identify individual households. The purpose of presenting these community-based percentages is to give a quantitative indication of the relative community response that the survey encompasses. In addition, by treating all information on a community basis, those individuals wishing not to participate in parts or all of this study could do so without identification.

This style of representing quantitative information as community-based rather than household-based includes every individual in the calculation of percents. The fifteen Wiseman children are included directly in these percentages. If parents responded to survey questions, their children were automatically counted as responders. Wiseman children generally do participate in local renewable resource use activities. They are direct consumers of resources such as meat, berries, wood heat, and fur products; they are indirect resource consumers, as cash that may be earned through utilizing local resources (such as selling fur or fur articles) is needed to support them; and they are "trainees" for future resource use activities.

As the study progressed, a concern was raised by community members about the comprehensiveness of the harvest information presented in this document. Residents felt that people unfamiliar with rural Alaskan livelihoods, particularly agency land managers who make policy decisions that affect these livelihoods, should have the opportunity to become familiar with all the local renewable resources utilized by residents. Additionally, there was a concern that if a resource was not identified now as being utilized, then future regulations may prohibit the use of this resource. Therefore, in addition to the hunting and trapping activities targeted for discussion in

this thesis, details on Wiseman community wood harvesting, fishing, natural vegetation harvest, and gardening activities are presented.

## 2. Hunting

Hunting is an activity integral to the livelihoods of Wiseman community residents. In all households in Wiseman, the importance of harvesting local food was stressed. "You eat what you can get your hands on" was an attitude that I generally heard. Meat was a main part of the diet of all the households that I visited in the community. All Wiseman households engaged in hunting activities in September 1992 while I was present in the community. A quantitative and qualitative examination of community hunting activity is therefore important in the development of an understanding of contemporary livelihoods in the area. Moose, caribou, and Dall sheep provide the major proportion of game meat for community residents. Grizzly bears and black bears are also harvested for meat.

The reasons given by Wiseman residents as causal factors of variation in the harvest of game species fall into the following three general categories:

(1) Land management agency policies that regulate hunting activity and methods of access in the area.

(2) Numerical change of species populations and variation in the movement of animals caused by varying environmental conditions.

(3) Hunting competition from non-local hunters.

Table 5 presents quantitative data about current Wiseman harvests of moose, caribou, Dall sheep, black bear, and grizzly bear. Not only are these species important as large units of meat protein for residents, but they are species often regulated by game management agencies.

**Table 5**

**Wiseman Community Big Game Harvest Data***

| Species | Moose | Caribou | Dall Sheep | Black Bear | Grizzly Bear |
|---|---|---|---|---|---|
| 1991 Community Harvest | 3 | 10 | 7 | 0 | 0 |
| Range of Individual Household Maximum Harvest in a Year | 1<br>no range | 1 - 6 | 0 - 3 | 0 - 3 | 1<br>no range |
| Range of Individual Household Minimum Harvest in a Year | 0<br>no range | 0 - 1 | 0 - 1 | 0<br>no range | 0<br>no range |
| Preferred Total Community Harvest | 8 | 12 | 8 | 2 | 1 |

* The information presented in this table represents a 97% community-based response to questions asked in household surveys. The community population at the time of these surveys was 29.

The 1991 community harvest figures in Table 5 represent the summation of numbers of animals of the indicated species harvested by individuals in the Wiseman community in 1991. Maximum and minimum ranges give an indication of individual household variation of game harvest within the community. These harvest ranges depict the variation in the highest and lowest numbers of animals of a species that individual households harvested in any one year since the household has lived in Wiseman. For example, the one to six range for maximum caribou harvest illustrates

that the most number of caribou any one household harvested in a year varied among community households between one and six animals. The phrase "no range" indicates that there is no variation in maximum or minimum harvest levels for the individual households in the community.

The preferred total community harvest represents the summation of numbers of animals of the listed species that Wiseman households indicated they would generally like to harvest in one year. This category does not take into account flexibility of alternative species harvesting, and it also is only applicable for the 1992 Wiseman family size and composition. These factors are important in determining "preferred" harvest levels, and are discussed later.

In Wiseman, meat is preserved by hanging, freezing, drying, smoking, salting, and canning. Freezing appears to be the most predominant form of preservation. Air temperatures allow meat to be kept frozen outside for much of the year, but in warmer months propane and electric generator-run freezers are needed. Six of the ten Wiseman households utilize freezers.

Little of the harvested animals appears to be discarded. Hides are used for mittens, mukluks, crafts, trapping bait, and predator attractors (such as tassels to attract the curiosity of lynx). Bones are sometimes used in crafts (carving) and in soup for people and dogs. Hooves, horns, and antlers are used in crafts. In 1992, a visiting trader exchanged antlers for beads. The beads are being used to make jewelry to sell.

In terms of small game, snowshoe hares, ptarmigan, and grouse are considered an important meat source. These three species are often purposefully hunted, as well as being harvested incidentally. As several Wiseman residents noted:

"Every time I'm trapping I shoot ptarmigan if I see them."

"When you go out moose hunting you always pick up small game."

Three households specifically mentioned the difficulty of providing accurate harvest numbers for small game:

> Since you harvest small game whenever you can, you do not keep track of the numbers.

Therefore, the following harvest quantities of small game listed in Table 6 are approximate. To provide a thorough description of small game harvest activity, the approximate 1991 harvest level and uses of each species are described. This table was compiled from information provided in household surveys.

During the surveys, I attempted to determine the specific number of times that a household hunted each species in a year, using the designation of a "trip" for each individual activity (such as a trip to hunt moose). However, I found that the concept of "trips" is somewhat of a misrepresentation of hunting activity. Generally speaking, resource harvest activity tends to be continuous in nature. Residents feel that they tend to "look for" renewable resources, and consider possibilities for harvesting such resources, whenever they are out in the area. I was told by residents that designating specific trips on the survey form for the harvest of specific species does not accommodate the opportunistic nature of harvesting activities.

Distances traveled to areas of harvest, and the length of stay while out harvesting are highly variable, since multiple and combined resource harvesting trips are often made. Using specific numbers for these categories in the original survey did not provide an accurate picture of harvest activity. Number ranges are more appropriate, but still cannot illustrate harvest trips for combined resources. Further details on

**Table 6**

**Wiseman Small Game Use and Estimated 1991 Harvest***

| Species | 1991 Community Harvest | Uses |
|---|---|---|
| **snowshoe hares** (rabbits) | 53 | human food, fur and body parts for clothing and craft articles |
| **grouse** | 96 | human food, dog food, trap bait, craft articles from body parts |
| **ptarmigan** | 73 | human food, dog food, trap bait, craft articles from body parts |
| **ground squirrel** | 17 total ground and red squirrels | human food, dog food, fur for craft articles and clothing |
| **red squirrel** | 17 total ground and red squirrels | fur and body parts for craft articles, some carcasses for dog food |
| **porcupine** | 0 | human food, quills for crafts and jewelry |
| **ducks** | 17 | human food |
| **geese** | 14 | human food |
| **marmot** | 0 | human food, dog food, fur for clothing and craft articles |

* The community population at the time of these surveys was 29.

spatial and temporal aspects of resource harvest are presented in section C of this chapter.

Various agency policies regulate harvest on the land surrounding Wiseman. Table 7 portrays land management regulatory changes affecting Wiseman residents in the period from pre-1974 to 1993.

To the west of Wiseman, in what is now Gates of the Arctic National Park and Preserve, transportation method restrictions have changed harvest patterns over time. Residents explained to me that the choice of areas used to harvest resources is limited

**Table 7**

**Regulatory Changes in the Wiseman Area, pre-1974 to 1993**

| Year | Regulation |
|---|---|
| pre-1974 | Firearms, motorized access, air access allowed in all areas for resource harvest. |
| 1974 | Emergency state closure of the corridor for the harvesting of big game. |
| 1978 | Emergency closure became a codified regulation. |
| 1980 | State allowed bow hunting in the corridor. Firearm prohibition continued.<br>Motorized access prohibited in the corridor, except for mining and oil and gas exploration activities.<br>Park and Preserve established. Park closed to non-subsistence game harvest, to all motorized ground access when there is not adequate snow cover, and closed to air access for subsistence resource harvest.<br>Wiseman listed as a "resident zone" for the park. |
| 1990 | "Subsistence Management" taken over by the federal government. State Statutes prohibiting firearm use and restricting motorized transport maintained. |
| 1992 | Federal government allowed firearm harvest of big game in the corridor by local residents. State receives ownership of the Coldfoot development node, upholds firearm prohibition on state land. Motorized access prohibition maintained on federal and state land. |
| 1993 | Federal government allowed local residents to use snow machines on federal land in the corridor for subsistence harvesting activities. |

by the ability to get to these areas. Motorized access to land areas is generally preferred over foot access because of the distances meat must be packed. Snow machines appeared to be the most far-reaching method of east-west transportation, while driving on the Haul Road provided a large north-south range of travel. The range of travel on a snow machine is limited by how much fuel can be carried.

Table 7 shows that aircraft and three and four wheelers are no longer permitted in the park area for "subsistence" hunting, trapping, or fishing purposes by Wiseman residents, as they were before the park was established in 1980. However, access by aircraft is allowed for sport fishing, as regulated by the ADF&G. Therefore, hunting in the park by Wiseman residents currently occurs primarily via snow machine and dog team when there is adequate snow cover. River transport is allowed in the park for the purposes of Wiseman resident resource harvest. However, drainages tend to run north and south in this region, so park drainages are relatively inaccessible by boat for those residing to the east. During periods when there is no snow cover, residents can and sometimes do walk into the park area to harvest resources, and pack out the meat.

Designated seasons dictate legal time of harvest for game, and therefore the method of transportation allowed to harvest game in the park. In the case of the fall moose hunt, the designated season does not occur at a time when there is typically enough snow to provide adequate snow cover in the Wiseman area. Wiseman hunters cannot usually therefore hunt fall moose in the Gates of the Arctic National Park and Preserve area via snow machine. However, people sometimes walk into the park looking for moose during the season. Meat may be packed out using dogs and people, and it is legal to cache moose meat in the park, and retrieve it once snow machines can be utilized. One hunter characterized caching meat for later retrieval as a "last resort," as there is always a risk of loosing the meat to other animals. Because of the distance and difficulty of getting large game back to Wiseman, residents prefer to harvest moose closer to home.

Table 7 shows that Wiseman residents were not allowed to hunt using firearms within the Haul Road corridor between 1974 and 1992. As noted previously, this

strip of land extends five miles on either side of the Haul Road, and, along with the land outside the corridor, is managed by the BLM. Residents feel that the no-firearm policy had lowered overall harvest rates of Wiseman residents, particularly for moose in 1990 and 1991. Apparently this policy has been enforced more rigorously since 1990, when the federal government took over management of "subsistence" on federal public lands. In the fall of 1992, the federal registered permit firearm hunt for moose in the corridor resulted in a higher community moose harvest (six moose) than in the previous year, when firearms were not allowed. In 1992 all moose were harvested within the Haul Road corridor. The caribou harvest also increased in 1992. Not only was it legal for local residents to use firearms to hunt caribou in the corridor, but caribou moved through the Toolik Lake area, about 100 miles north of Wiseman on the Haul Road, and were easily accessible by highway vehicle.

Moose are known to move between winter and summer ranges, the magnitude and timing of this movement being closely related to both the timing and the accumulation rate of the snow (Coady 1974, 432). Wiseman moose harvest tends to occur at lower elevations: the closer to mechanized transport the better for the purposes of hauling meat. Therefore, when moose are higher in the hills, it is likely that they will be harvested less. On a larger scale, population numbers fluctuate. For example, in a NPS study of human use of resources in the then-proposed Gates of the Arctic National Park area, Bane states:

> Moose (*Alces alces*) are common throughout the Koyukuk Valley and the central Brooks Range. This largest species of the North American deer family has experienced fluctuations in population and range in the past, with Native informants relating a particularly low population density during the first three decades of this century. During the last two decades, the moose population expanded significantly both in numbers and range . . .
>
> (Nelson, Mautner, and Bane 1978, 26-27).

Further:

> Caribou migrations and populations are notoriously unpredictable and unstable. For several years, large numbers of caribou may annually or seasonally move through the same general area and then, for many known and unknown reasons, fail to appear in a given year.
>
> (Nelson, Mautner, and Bane 1978, 34).

Margaret Murie, in her book *Two In The Far North*, describes the excitement when caribou passed near Wiseman in 1924: "Here was a great event. The caribou had not come so near Wiseman in years; they had always crossed over the range much farther north . . . " (Murie 1957, 171). Apparently caribou have not migrated through Wiseman since 1976. As one current resident noted:

> " . . . caribou is one animal that [doesn't] do anything consistently . . . wherever [caribou] are at, we are going to go out and get them . . . people talk about caribou tracks or caribou sign, because if somebody needs meat, they are going to go and look for those caribou . . . "

Residents feel that hunting competition in the area from non-local hunters has been steadily increasing, with a significant increase in the past two years. The Wiseman area is accessible via the Haul Road. The Wiseman-Nolan road provides access beyond the corridor boundary, where firearms may be used by both local and non-local hunters. Wiseman residents feel that increased hunting competition lowers their harvest success. However, in 1992 more Wiseman residents were successful in harvesting moose (in the new firearm hunt) than in 1991.

These factors of variation which influence harvest quantity also result in a variable dependence on any specific species of game animal in any given year. For example, grouse are apparently relatively abundant in the Wiseman area now, compared to ptarmigan. Grouse are therefore harvested to a somewhat greater degree than

ptarmigan. The grouse population densities are expected to decline and the ptarmigan population densities are expected to rise. Therefore it is anticipated that grouse consumption will be lower in future, while ptarmigan consumption will be higher.

This shifting of resource use depending on availability has been documented in other central Brooks Range resource use studies:

> When considering subsistence it is important to remember that it is a life built on alternatives. One cannot understand such a lifestyle if he concentrates only on the 'obvious' activities such as the harvest of moose or the catching of salmon. It is necessary to understand the relationship of a subsistence-oriented people to all of their potential resources.
>
> Another word for 'alternatives' may be 'flexibility.' Nature is rarely if ever in a state of static balance. Weather patterns change from year to year, stream beds alter constantly, lakes slowly fill and die, wildlife populations are always in a state of flux, migration routes shift; the examples are endless.
>
> (Nelson, Mautner, and Bane 1978, 24).

> Since major fish and mammal populations fluctuate in space and time, successful top predators ['living-on-the-land people'] must be opportunistic in seeking out alternate prey when primary species are absent or crash; . . .
>
> (Brown 1988, 1:21).

The preferred total community harvest of 8 moose, 12 caribou, 8 sheep, 2 black bear, and 1 grizzly bear (Table 5) represents the approximate quantity of game desired at the present time. The moose harvest is extremely important to Wiseman residents, as this species provides such a large quantity of meat per animal. These amounts of need are expected to increase in the next five years as children grow, because older children will consume more meat. The anticipated increase ranges among households from "may increase a little" to "consumption could double." This variation generally depends on the number of children in the household. In a projected ten year time frame, game meat consumption is generally expected to be somewhat higher than it is now. However, some children will have left home by

then, so the ten-year projected increase will not be as large as the five-year projected increase.

As was previously noted, there has been a significant change in Wiseman's population composition from an average age of 65 in 1944 to an average age of 19 in 1992. It is evident that age composition of the community population is an important factor affecting the levels of need for game over time.

Variation in household game meat consumption is influenced somewhat by the degree of sharing of meat within the community. In 1991, totals of 2-3/4 moose, 2-1/2 caribou, and almost one Dall sheep were passed around Wiseman households. Two moose and two caribou out of these totals were road kills brought into Wiseman by Fish and Wildlife protection officers, while the rest of the shared meat, 3/4 moose, 1/2 caribou, and one sheep, represents meat harvested by Wiseman hunters. Harvested meat is sometimes shared outside the community. A Bettles resident told me that members of one of the current Wiseman households would bring game to Bettles. When I accompanied family members out looking for caribou on one occasion, the intent was to harvest enough to provide not only for the family, but to take one caribou to a Bettles friend whose hunting ability had been restricted by an injury. Some meat is occasionally offered to friends who live in Fairbanks, and on two occasions I was given some meat to take back with me to Fairbanks.

The practice of passing harvested resources around the community is apparently an acknowledged, accepted part of the local lifestyle. Residents spoke of sharing resources in a way that was, to me, quite matter-of-fact. Meat is the resource most often shared among residents, as the following comments explain:

> "If people need meat, and I've got meat, I like to give it away . . . I might get meat later. Especially old people - these old Eskimos, we always gave them

> meat, and they told us that you'll have good hunting when you give away meat . . . it seems like they would just say that [to get given meat], but it seems like when you do [give away meat] you have good hunting - I mean it works! This isn't just a saying. You have good hunting when you give away meat."
>
> "This community does share a lot of products. There's always moose meat getting passed back and forth."
>
> "I don't mind giving away meat - that's traditional."
>
> "This was kind of a completely different year for me [1991/92]. I didn't get a moose, and I didn't think that I could live without a moose, but with sharing and with hunting sheep more, we're doing all right - we'll get through it."

The only criteria stated that affects the ability of people to share resources was the availability of harvested resources. For example, the following were statements made regarding sharing criteria:

> You share what you have, no matter how little.
>
> Someone has a good year and therefore shares more meat, others may have a bad year. The roles may be reversed the next year.

The number of any given species harvested by community residents can vary then, from year to year. The factors that affect this variation include:

(1) Land management agency regulatory policies.

(2) The movement of individual animals in response to local environmental conditions, and fluctuation in numbers of species populations.

(3) Competition from non-local hunters.

Flexibility in harvesting alternate species result from these factors of variation. If one species is harvested less for any of the reasons noted above, efforts will be made to harvest another species more, in order to acquire a particular or "preferred" amount of meat required to feed themselves and their families for the year.

### 3. Trapping

Trapping is also an activity integral to the livelihoods of Wiseman community residents. The primary furbearer species harvested by Wiseman trappers are wolf, wolverine, lynx, and marten. Quantitative information therefore focuses on these four species. Fox, beaver, weasel, mink, and the occasional coyote and muskrat are also harvested. In Wiseman, 87% of the community are directly associated with trapping, in that they live in households where at least one member maintains traplines.

Reasons given by trappers to explain why numerical harvest averages are believed to be an inappropriate method of depicting trapping activity focus on four areas:

(1) The cyclical nature of furbearer population densities.

(2) The variation in weather and snow conditions.

(3) The level of experience of the individual trapper.

(4) Trapping competition.

Wiseman trappers feel that trapping harvest is strongly tied to species population densities. They consider species population densities to be cyclical in nature, causing variable population numbers, and resulting in a highly variable trapping harvest. The following example given to me by one trapper illustrates this explanation for variation in population densities of furbearers:

> This trapper noted that lynx are currently at or near a low point in their population cycle. Apparently the relative population of rabbits (snowshoe hares) was very high in this area in the early 1980s. When the vegetation could no longer support such a high rabbit population, the rabbit population declined significantly. With fewer rabbits available for consumption, predators that utilized rabbits also underwent severe population reduction. Lynx is one such predator species.

This example of lynx/snowshoe hare population cycle interaction has been noted in scientific literature, although the causal relationship between the population cycles of the two species is not conclusively understood. The following quotes are examples of this literature:

> Recent evidence suggests that as the numbers of [snowshoe] hares grow, so does the number of lynxes; the cycle takes place about every 9 years. The numbers of hares, however, seem to fluctuate regardless of whether lynxes are present or not, and so this situation is more complex than once thought.
> (Raven and Johnson 1989, 458).

> The seeming dependence of the lynx and other furbearers on the snowshoe hare as a staple food was early recognized . . . graphic descriptions of lynx starvation following rabbit 'crashes' have been given . . . [w]hile the lynx, colored fox, coyote, fisher, and marten cycles are generally believed to have reflected the periodic abundance of their chief prey - the snowshoe hare - this explanation, or at any rate its universal applicability, has been questioned by some workers.
> (Keith 1963, 65).

By examining the 1 to 100 range of lynx harvest maximums in any one year in Table 8, it would appear that at least one individual trapper has harvested 100 lynx in one year in the past. Although this is true, compared to this range the 1990/91 Wiseman total community lynx harvest of 24 is relatively low. The 1990/91 lynx harvest is also lower than Wiseman trappers expect in future years, as they feel that the local snowshoe hare population is increasing. They are expecting the lynx population to increase as a result. Community trappers assume that when the lynx population is higher, they will catch more lynx.

Weather and snow conditions are highly variable from year to year. Deep snow and high winds can cover or drift in trap sets rapidly, which lowers the number of effective trapline sets. Deep and/or frequent snowfalls also lessen the ability of the trapper to travel the trapline, as new or drifted snow makes traveling more difficult

by dog team or snow machine. Under such conditions, Wiseman community trappers may either maintain less trapline mileage until conditions improve, or may not be able to check traps as frequently as needed to clean (dig out from under the snow) and reset the traps.

One Wiseman trapper said that the 1991/92 season had very good weather for trapping: it was a low snow year, temperatures were relatively warm, and there were few hard blows. In contrast, the 1992/93 season brought record snow depths (over six feet in an area where two to three feet is normal), severe cold snaps, and much drifting snow. Wiseman trappers said they had a difficult time maintaining traplines in the 1992/93 season.

Low snow cover may also mean less trapping effort by Wiseman community trappers. As was previously discussed, little snow cover means that snow machines, sleds and dog feet will suffer physically through continual impact with frozen ground. Wiseman trappers said that both deep and shallow snow cover prevent them from utilizing their entire trapline mileage at the outset of each season. With deep snow and particularly when dog teams are used, trapline trails are established incrementally as the season progresses and/or as weather allows. The amount of overflow is also a variable in the ability of the trapper to maintain a trapline. Overflow conditions vary throughout the year, and from one year to the next.

Wiseman trappers think that deep snow brings some prey species, such as moose, to lower elevations (the valley floors), while apparently causing other prey species, such as sheep, to stay high on the wind blown ridges. Predator species such as wolves will therefore apparently move between the valley floors and high ridges. Wiseman traplines are located predominantly in valley floors, because valley bottoms are more easily traveled by snow machine and dog sled. Marten lines tend to be located more

on lower forested slopes, however, in better marten habitat. Most furbearers may thus be trapped when they are moving across or along drainages. With severe cold and deep snow, trappers claim that neither prey nor predator move around much at all.

Wiseman trappers also cite experience as a factor of variation in trapping harvest. As an individual trapper acquires more knowledge, it is likely that his or her harvest levels will increase.

Trapping competition occurs when another trapper sets traps adjacent to a trapline maintained by a Wiseman resident. Wiseman trappers note that this decreases their harvest levels. During the 1991/92 trapping season, this type of trapping competition occurred twice, when non-Wiseman residents established or attempted to establish such adjacent or concurrent traplines. Wiseman trappers apparently avoid such competition among themselves.

Wiseman trappers note that other factors influence variation in trapping harvest, such as trapline conservation techniques and trapping to provide income and fur products deemed necessary for community members. The income gained from trapping and trapping conservation techniques are described in detail in later sections.

Wiseman traplines in general were either given away by the previous trapper, passed down by family members, or were previously open (were not being trapped by anyone). In one case acquisition of a line was accomplished through trade. One household mentioned that they felt they could sell a trapline along with selling their cabin. There are now no open (unclaimed) lines in the area "within striking distance" of Wiseman. The "right" to use certain traplines is usually acknowledged among local trappers, although the previously-mentioned competition with outsiders does occasionally occur. This usufruct right to run a particular trapline in particular

drainages follows customary law rather than a legally protected ownership right. Traplines represent a property interest to the trapper.

Trappers were asked how many trapline miles they maintained in any given five year period, as it was understood that not every mile of every trapline is utilized each year. This concept is discussed in Chapter VIII, Section C. Wiseman trappers claim that they use approximately 1140 miles of established trapline. Of the households who are associated with trapping, three trap more consistently than the others. Quantitative trapping harvest information is presented in Table 8.

**Table 8**

**Wiseman Community Estimated Trapping Harvest Data***

| Species | 1990/91 Community Harvest | Range of Individual Household Maximum Harvest in a Year | Range of Individual Household Minimum Harvest in a Year |
|---|---|---|---|
| Lynx | 24 | 1 - 100 | 0 - 4 |
| Wolf | 5 | 0 - 8 | 0 (no range) |
| Wolverine | 14 | 0 - 7 | 0 - 2 |
| Marten | 84 | 3 - 60 | 0 - 17 |
| Fox | 21 | N/A | N/A |
| Beaver | 4 | N/A | N/A |
| Muskrat | 0 | N/A | N/A |
| Mink | 1 | N/A | N/A |
| Weasel | 4 | N/A | N/A |
| Coyote | 0 | N/A | N/A |

* The information presented in this table represents an 85% response by community members directly involved with trapping (87% of the Wiseman community is directly involved with trapping). The community population at the time of these surveys was 29.

The 1990/91 community harvest figures in Table 8 represent the total number of animals harvested by individual trappers in Wiseman in the 1990/91 trapping season.

As with game harvest ranges, the maximum and minimum ranges in Table 8 give an indication of individual variation of trapping harvest within the community without specifically identifying individual household information. These harvest ranges depict the variation in the highest and lowest numbers of furbearers that individual trappers harvested in any one year since they have lived in Wiseman. For example, the three to sixty maximum range for marten illustrates that the most number of marten any one trapper harvested varied among trappers between three and sixty animals. The phrase "no range" indicates that there is no variation in maximum and minimum harvest levels for the individual households in the community.

Distances from Wiseman to the beginning of traplines vary from two to sixty miles. The length of traplines varies from two to eighty miles. The number of traps on a line varies from twenty-five to sixty traps. Legholds, snares, and conibears are used, the former two being predominant.

Among the trappers who were trapping consistently in the winter of 1992, traplines were checked from between twice a week, to once every ten or twelve days, depending on snow and weather conditions. Snow machines or dog teams are used to check lines, and in one case a pickup truck is used on the Haul Road to transport a snow machine to the lines. The two or three trappers who use dog teams stay out from two to ten days, camping in the open overnight, or in one case staying in trapline cabins. The four or five who use snow machines usually run a line in a single day. One trapper sometimes uses a dog team, at other times a snow machine. Pelts are dried or tanned. Some are sold, some are used to make articles for sale or for household use. Hats, mittens, and ruffs are the most common articles made.

Furbearer products are sometimes shared: in the 1990/91 season, one wolf and one fox were given by one household to another related household, and in the

1991/92 season, one beaver pelt was given to a neighbor. The trading of furs for services (such as taking care of dogs) and for items (such as fur articles) is a relatively common practice. Carcasses are used for bait, dog food, or are sold to the NPS for use in furbearer studies. Wolf, beaver, lynx, and muskrat are sometimes eaten.

Three households have young children that are learning or will soon learn to trap. One trapper pointed out that he has to keep his lines open so that they won't be taken over by someone else and his children denied the opportunity to trap them.

Trapping requires a substantial time investment. Traps must be set and checked, and animals caught must be skinned and dried. In order to get the highest price, and for use in the home, the hide must be tanned. In all, the preparation of fur pelts is a labor-intensive process. As one community member said:

> "If you have lots of time and no money, you try and get the most out of them that you can."

All the traplines I visited required significant amounts of energy to maintain. The longer snow machine lines required a full tank of fuel (five or six gallons) to run. The eighty mile trapline takes between four and ten days to run by dog team. Both methods of transport require sustained physical effort, whether that be running a dog team or wrestling a snow machine over rough terrain all day.

Market prices for fur can fluctuate. A Fairbanks fur buyer said that in 1986, the average price paid for a lynx pelt was $350 (Mattie 1993). In the 1990/91 season, the average price for lynx was $50 (ibid.). Marten prices in 1987 averaged $75 to $80, and averaged $55 in 1990/91 (ibid.). Wolf and wolverine fur prices are apparently more stable, averaging about $200 for wolf, and $250 for a male wolverine (ibid.).

This variable market price of fur has a variety of effects on Wiseman trapping activity. One trapper said he cannot afford to trap a species if the market price of that species is low. Another explained that if low price species are caught, the pelt is used in the household. Two households continue trapping as a part of the lifestyle, and just get paid less if the market price of a species is low. One trapper explained:

> "If the cats were high (in price), I would stay up high and catch the cats, or if the marten were high, I would stay in the hills and catch the marten."

In summary, the quantity of furbearers trapped in a season by Wiseman trappers can vary greatly. This variation is caused primarily by the cyclical nature of furbearer population densities, the variation in weather and snow conditions, the level of experience of the individual trapper, and trapping competition. Ownership of traplines is considered to be a usufruct right, and Wiseman traplines were generally acquired through family ties, by being passed on from the previous trapper, or were established by the current trapper. Most of the available drainages in the Wiseman area are currently part of maintained traplines.

Furs are either sold directly, made into fur articles to sell, or kept for use in the household. Variation in the market price of fur has variable effects on Wiseman trapping activity.

## 4. Cabin Use While Harvesting Resources

Information regarding the use of cabins was requested in the initial survey. Seven of the participating Wiseman households used remote cabins while engaged in resource harvest activities in 1991. Cabins to the east of the Haul Road have been used for trapping and occasionally for fishing trips, and cabins in Gates of the Arctic National Park and Preserve are occasionally used by five households for one to three days when residents are engaged in caribou, sheep, and moose hunting. Four individuals use remote cabins when trapping.

## 5. Wood Harvesting

Nine of the ten Wiseman households are heated 100% of the time with wood. The other household is 75% wood-heated. Given the continental polar climate of this region, the ability to harvest wood for fuel is extremely important for maintaining a household. The wood cut by Wiseman residents is primarily used for heating. Other uses are described in Table 9. Spruce, both black and white, is the predominant species utilized both for heat and construction. White spruce is preferred as it usually has a greater volume of wood per tree. Birch is appreciated as a dense, hot-burning firewood, but is much less abundant than spruce.

Table 9 provides the estimated amounts and uses for the 1991 community wood harvest. The table is compiled from information given in household surveys. A cord of wood represents the volume stacked in a pile measuring 4 feet by 4 feet by 8 feet.

**Table 9**

**Wiseman Community Wood Use and Estimated 1991 Harvest***

| Species | 1991 Community Harvest (cords) | Uses |
|---|---|---|
| **spruce** | 47 - 48 | firewood, logs, boards, furniture, poles, cooking wood |
| **birch** | 8 - 9 | firewood, furniture, boards, cooking wood, bait sticks |
| **cottonwood** | 2 - 1/2 | firewood, furniture, bait sticks |
| **aspen** | 1/4 | firewood, bait sticks |
| **diamond willow** | 1/2 total | firewood, crafts, tool handles, cooking wood |
| **alder** | 1 total | firewood, crafts, barbecue wood |
| **spruce boughs** | | sleeping mats, cubby sets, trapping markers, fire starters, dog bedding |
| **sticks/poles** | | trap sets, trapping trail markers, ramps, miscellaneous uses such as drying frames, cooking sticks, wood for shelters, lean-tos, and caches |

* The community population at the time of these surveys was 29.

The main factor of variation for the amount of wood harvested is the severity of the winter. The colder the winter, the more wood is burned. Where additions have been built onto cabins (usually to accommodate increased family size), an additional stove is sometimes needed, which in turn increases the demand for fuel. Households with babies and young children often keep cabins warmer than other households. If insulation is added to the cabin structure, wood consumption can decrease noticeably. Construction materials such as house logs, rock, and chinking mud, are harvested locally.

The majority of the community's firewood is dead wood harvested along the Haul Road and the pipeline. Nearby wood yards in the Middle Fork of the Koyukuk drainage are also managed. Dead wood is harvested, and large live trees are ringed to provide dead wood two years later. The wood yards I visited had been in use for five to fifteen years. Residents are continually on the lookout for potential wood yard areas, although the birch stand I visited is cut continuously on rotation. These wood yards tend to be viewed as a property interest. Residents respect other household's yards, and refrain from cutting in them. Two households also mentioned that they cut "sweeper trees" in the winter, trees that overhang undercut banks on the Middle Fork of the Koyukuk. The sentiment here is that these trees will probably fall into the river at break-up, or when the river changes channel braids.

In the spring of 1992, significant quantities of firewood and house logs were salvaged by some households from the roadway clearing that occurred just north of Coldfoot. Wood harvesting techniques and wood yard management are further described in the concepts of conservation section. Pickup trucks, snow machines, and dog teams are used to haul wood.

### 6. Fishing

ADF&G regulations do not permit the harvest of salmon from the Middle Fork of the Koyukuk River. In the past, people had apparently used salmon from this area. Based on multiple comments made by community residents, it is apparent that this drainage currently has low fish populations of all species:

> " . . . This country here never does support very big runs of fish. [It is] real hard country. The water freezes right to the bottom of the river [the Middle Fork of the Koyukuk] in a lot of places, except specific areas, and the fish spawn in those specific areas. The usable habitat is really, really small, and then there's a nutrient problem with this river. Smolt salmon eat zooplankton, and this river is real low in zooplankton, because there is mineralization upriver, like copper and stuff, that kills basically the [bottom of the] food chain."

Another household said that they would fish more if the fish populations, especially grayling, were higher in the Middle Fork of the Koyukuk drainage.

One household was concerned with the amount of sport fishing that is allowed in the corridor:

> "I am sort of discouraged with the promotion of the sport fishing in this drainage here [Middle Fork of the Koyukuk]. They are actually encouraging depletion of the local grayling stock by promoting sport fishing in an Arctic region . . . This is the poorest fish river that I know of in the Brooks Range."

Except for one household, fishing is currently more commonly regarded as less of a "subsistence" activity, and more of a "recreational" activity, in that yearly fish harvests are not a staple part of the household diet. The one exception does regard fishing as a "subsistence" activity and expects household fish consumption to expand as the household children grow. Another household purchases quantities of whitefish from outside the area for household and dog consumption. In particular, families often take their children fishing as a learning activity. With increased recreational development along the Haul Road, residents feel that more tourists will be fishing the creeks where creek access (parking areas and trailheads) are provided. Several residents commented that this may lower local fish populations, particularly of grayling.

The species harvested by Wiseman residents include grayling, lake trout, pike, burbot, whitefish, and Arctic char. Sheefish are harvested in the central Brooks Range under sport fishing regulations inside and outside the park area, but not in the Wiseman area. Red salmon are harvested in Bristol Bay and brought back to Wiseman. As with small game, fish are often caught on an opportunistic basis. For example, one resident explained that he carries a fishing line along whenever he is out on the trail. The number of fish caught is therefore hard to recall, and thus figures given are approximate. In order to provide a general idea of harvest levels, the following figures of the estimated 1991 community harvest are presented in Table 10. The information presented in this table was compiled from household surveys.

**Table 10**

**Wiseman Community Estimated 1991 Fish Harvest***

| Species | Approximate 1991 Harvest |
|---|---|
| **grayling** | 128-133 |
| **burbot** | 5 |
| **lake trout** | 19 |
| **pike** | 8 |
| **sheefish** (non-local harvest) | 6 |
| **red salmon** (non-local harvest) | 31 |

* The community population at the time of these surveys was 29.

Fish harvest varies according to the ability to access fishing areas, the weather conditions, how high the water is, and how much time is available to spend on fishing trips. Fish are passed around among households. In 1991, the following were

received by two Wiseman area households: 15 grayling, 2 lake trout, 4 sheefish, 2 red salmon, and 50 whitefish.

Most fish are eaten when caught. When they are not eaten immediately, they are frozen or smoked. Residents use foot, aircraft (one family), occasionally boats, and pickup transportation to go fishing.

## 7. Natural Vegetation Harvests

The vegetation in the Wiseman area includes many species of edible berries. Residents note that local wild berries provide a good source of vitamin C, as fresh fruit is costly to obtain and difficult to preserve in Wiseman. In order to provide a general idea of harvest levels, the following figures of the approximate 1991 community harvest are presented in Table 11. The information was compiled from household surveys. The berries were either consumed immediately, frozen, canned, dried, or put into pies, cakes, sauces and jams. Individual household harvest in 1991 was termed greater than in previous years by some households, and lesser than in previous years by other households.

Berries are sometimes shared among community residents. The following were received by one Wiseman area household in 1991 from neighbors: 4 qts. blueberries, 6 qts. lowbush cranberries, and 2 qts. raspberries.

Variation in the quantity of berries harvested in a particular year can apparently be quite large, as high as 50%. Berry pickers say that yearly crop variation is influenced

**Table 11**

**Wiseman Community Estimated 1991 Berry Harvest, in Quarts***

| Species | 1991 Harvest (quarts) |
|---|---|
| **blueberries** | 54 |
| **rose hips** | 5 - 6 |
| **bear berries** | occasional |
| **lowbush cranberries** | 50 |
| **moss (crow) berries** | 4 - 5 |
| **cloud berries** | occasional |
| **raspberries** | 12 |
| **nagoon berries** | occasional |

* The community population at the time of these surveys was 29.

by the following factors: amount and timing of rainfall; the degree of dust that settles on some berry areas near the Haul Road (it is conjectured that some dust seems to promote berry production, while a lot of dust inhibits harvest); and the amount of snow cover (deep snow insulates the ground and may provide protection for some berry species). Additionally, young children may keep parents (particularly the mother) tied to the cabin more. Older children can help in picking berries, which increases the berry harvest.

In addition to berries, other species of natural vegetation are harvested every year. Six mushroom species (locally known as orange delicious, boletes, shaggy manes, morels, puff balls, and fried chicken) in addition to local grasses used for dog bedding, are sought out and harvested on a regular basis. Other vegetation is used relatively regularly and is harvested on an opportunistic basis. Wiseman residents described the uses of vegetation species in households surveys. These species and their uses are presented in Table 12.

## Table 12

## Vegetation Used by Wiseman Community Residents

| Species | Uses |
|---|---|
| **birch leaves** | human and dog bedding, trapping, compost |
| **willow leaves** | human and dog bedding, trapping, compost |
| **cottonwood leaves** | animal bedding |
| **rose hip petals** | jelly, food, scent in cabins |
| **coltsfoot** | food, tea |
| **dandelions** | salad greens |
| **fireweed** | salad greens |
| **Labrador tea** | tea |
| **pineapple-weed** (known as chamomile) | tea, food (snacks) |
| **caribou lichen** | food |
| **lambs quarter** | salad greens |
| **kinnikinnick** | medicinal tea, smoking leaves |
| **wild chives** | food |
| **plantain** | salad greens |
| **Eskimo potato - Masu** | food |
| **spruce pitch** | medicinal (wounds) and a sealer |
| **willow bark** | tie material, dye |
| **birch bark** | fire starter, baskets, crafts, wallpaper |
| **birch sap** | syrup, drinking straight and in coffee |
| **grasses** | trapping, dog bedding |
| **moss** | chinking, insulation, bedding, scent for cabin |
| **mushrooms (6 species)** | food |
| **birch tree fungus** | bug smudges, cabin decoration, artwork |

## 8. Gardening

The cultivation of gardens is a yearly activity in Wiseman, and produces an immediate source of fresh vegetables that would otherwise be difficult to obtain through the cost and preservation difficulty when ordering from Fairbanks. Crops are eaten fresh and preserved by canning, freezing, or storing in cold cellars. Cold cellars are small areas beneath trapdoors in the floorboards of cabins. These areas keep produce and other food items cool, and usually prevents them from freezing in the winter. Table 13 shows the approximate amount of crops that were raised by six Wiseman households in 1991, as compiled from household survey data.

**Table 13**

**Wiseman Community Estimated 1991 Garden Production, in Pounds***

| Vegetable | Estimated 1991 Production, in Pounds |
|---|---|
| potatoes | 280-330 |
| celery | 20-21 |
| broccoli | 75 |
| peas | 10-11 |
| squash | 30-31 |
| cabbage | 100 |
| zucchini | 25-26 |
| beets | 20-21 |
| cauliflower | 65 |
| cucumber | 10 |
| carrots | 88 |
| Swiss chard | 21 |
| lettuce | 65 |
| tomatoes | 30 |
| radish | 5-6 |
| rhubarb | unknown |

* The community population at the time of these surveys was 29.

In addition, nasturtiums, turnips, chives, and flowers were raised in 1991.

Crop production varies with temperature, and the timing and amount of rainfall. Crops grow rapidly in the long hours of sunlight from the time the snow is first off the ground (usually in May) until the first frost, which can occur at any time in the summer (usually not until August). The soil is apparently not well suited for domestic crops, and the expense of fertilizer limits its use.

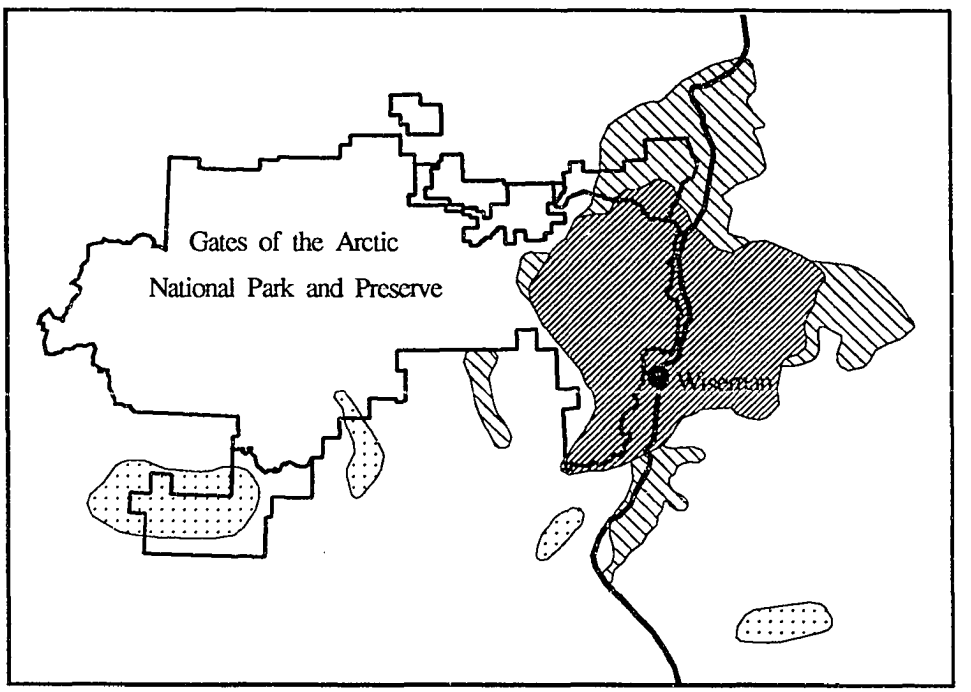
## C. Spatial and Temporal Patterns of Renewable Resource Use

Map 7 illustrates the land area currently utilized by Wiseman residents in resource use activities. Included on the map is a list of additional areas where renewable resources are regularly harvested. The map designates three regions. The primary renewable resource use area is a spatial representation of the area Wiseman community residents consider to be of *critical importance* in conducting their resource harvesting activities. The secondary use area is a spatial representation of the area that residents consider to be *extremely important* in conducting their resource harvesting activities, and the tertiary renewable resource use area represents the area they consider to be *important* in conducting their resource harvesting activities.

Wiseman residents stated many times that they prefer to hunt as close to home as possible, to lessen both the distance meat has to be hauled, and the transportation costs. This became clear to me in September of 1992. Highway vehicles would leave Wiseman morning and evening, scouting for moose along the Haul Road. Of

MAP 7

SPATIAL REPRESENTATION OF THE AREAS USED BY WISEMAN RESIDENTS FOR RENEWABLE RESOURCE HARVEST




Primary Use Area (critical importance)

Secondary Use Area (extremely important)

Tertiary Use Area (imortant)

Haul Road

**The following areas are also currently used for the harvest of resources by Wiseman residents:**

Colville River

Lower parts of the Chandalar and Anaktuvuk Rivers

The Killik and Itkillik drainages

Along the Haul Road to the north, as far as Franklin Bluffs

Helpmejack Lake

Chandler Lake

N

1:3,500,000

the six moose harvested that month, five were harvested within a mile of the Haul Road. I concluded that the Haul Road was the preferred location for moose harvest now that it is legal for Wiseman residents to use firearms in the corridor. I was also present during the harvest and packing of the sixth moose. It took three people and two pack dogs all of one day, and two people the next morning to haul the meat back to Wiseman from where the moose was shot high on a mountainside, approximately four miles from the Haul Road.

From a perspective of continuity, members of the current Wiseman households who have lived in the area since the early 1970s indicate that their total area of renewable resource use has not changed over time, but the intensity of use of that area has changed. This change has apparently occurred primarily in response to changing modes of access and land management policies of the area. Both the Haul Road/pipeline construction and the establishment of Gates of the Arctic National Park significantly affected these spatial patterns of resource use.

Residents told me that historically, the areas immediately adjacent to Wiseman were left for the less mobile old-timers to utilize for hunting and trapping, while younger hunters accessed areas further from the community. In response to the construction activity of the pipeline and Haul Road (1974 to 1976) and the 1974 closure of the corridor to big game harvest, Wiseman hunters apparently shifted their use patterns away from the immediate vicinity of the pipeline corridor.

Several residents told me that after the park was established in 1980, areas to the east of the corridor became much more intensively used for harvest activity, while the areas to the west of the corridor (now within the new park area) became much less intensively used. This was due to the fact that aircraft were not allowed in the park to access harvest areas, whereas they could still be used to access harvest areas to the

east of the Haul Road. These residents feel that the degree of sport hunting, particularly guided hunting, subsequently increased significantly to the east of the corridor after the 1988 abolition of individually managed "guide areas" for guided sport hunting in the state (Owsichek v. State, Guide Licensing, 763 P.2d 488). Residents claim that the area east of the Haul Road is now used more intensively by sport hunters, causing Wiseman hunters to utilize areas to the west more intensively. Unfortunately, harvest information from the area's licensed guides has not yet been made available for public use (West 1992), so this change in sport hunting and harvest activity cannot be verified.

In early 1992, projections for future shifts in intensity of use areas centered around both the new firearm hunt for local residents, and the potential increase in competition from sport (non-local) hunters in the corridor. Prior to the anticipated fall 1992 registered permit corridor firearm hunt for moose and sheep, residents thought that hunting efforts would focus much more on the corridor. This did in fact occur. However, some residents also conjectured that the current BLM recreational development plans for the Haul Road will provide facilities for easier access for more sport hunters, both legal bow hunters and illegal firearm hunters, to hunt in this area. With the anticipated increasing numbers of sport hunters in the corridor, some Wiseman residents say that they may go back to hunting in the park area more intensively, as they have no hunting competition there.

From this discussion it is apparent that Wiseman resident hunting activity has been affected by newly established resource and land management areas and policies. The increase in accessibility to the general area caused by the construction of the Haul Road, and regulations allowing some hunting in the corridor, has made the park lands more attractive to Wiseman residents. This is due to the fact that despite the

difficulty of accessing the park by mechanized transport when there is not adequate snow cover, Wiseman residents have no harvest competition in the park.

All Wiseman households participating in the surveys individually declined to draw specific areas of renewable resource use or harvest activity on maps. Seven households felt that such areas, if drawn, could and would be used by the NPS to designate a "subsistence use area" for Wiseman in the future. There is a copy of the November 1984 NPS map titled "Traditional Areas of Subsistence Use Known Currently to the National Park Service" in Wiseman. Although current Gates of the Arctic park managers have said that this map is not based on factual data, and is not being used for management purposes, this map illustrates to local people how resource use boundaries could be drawn by the NPS once residents had provided areas of resource use on maps. Given the shifting intensity of use of the surrounding land areas previously described, however, it is evident that flexibility in utilizing resources in various areas is the response to changing land management boundaries and resource management policies.

In order to gain insight into the relative importance of renewable resources found in Gates of the Arctic National Park and Preserve, I asked Wiseman households to estimate the average percent of the following animals that have been harvested inside the park area, as opposed to outside the park area since the household has lived in Wiseman. Hunted species I included were moose, caribou, Dall sheep, black bear, and grizzly bear. Furbearers included in the question were wolf, wolverine, lynx, and marten. The percentage of total harvest of game species derived from park area resources (Table 14) represents information provided by 84% of the community. The percentages of furbearers derived from park area resource (Table 15) represents

**Table 14**

**Proportion of Total Game Harvested by Wiseman Residents from Gates of the Arctic National Park and Preserve (Estimates Only)***

| Species | Moose | Dall Sheep | Caribou | Black Bear | Grizzly Bear |
|---|---|---|---|---|---|
| Percentage | 43% | 67% | 28% | 32% | 57% |

* Estimates reflect the total time period that current residents have lived in Wiseman.

**Table 15**

**Proportion of Total Trapping Harvest by Wiseman Residents from Gates of the Arctic National Park and Preserve (Estimates Only)***

| Species | Wolf | Wolverine | Lynx | Marten |
|---|---|---|---|---|
| Percentage | 46% | 49% | 66% | 21% |

* Estimates reflect the total time period that current residents have lived in Wiseman.

information provided by 93% of the people in households directly involved with trapping (87% of the community is directly involved with trapping).

The percents provided in Tables 14 and 15 were arrived at by calculating the community average of individual percents provided by households participating in the surveys. These estimated percentages only give an indication of relative dependence on the park area for the harvest of the assorted species. One person specifically pointed out that the percentages he provided were estimated:

> For hunting, it was tough to recall every single kill and remember its exact location, and for trapping he felt that a range of percents for furbearers harvested inside and outside that park area would be more appropriate, since trapping harvest tends to vary so greatly.

Traplines tend to provide for harvest activity that is more fixed in location than hunting. Consequently, I was able to obtain additional data regarding relative location of trapping activity. Of the estimated 1140 miles of traplines claimed by residents, Wiseman trappers note that 785 of those miles, or 69%, are located within Gates of the Arctic National Park and Preserve. All the percents for trapping harvest noted in Table 15 are lower than this 69%, illustrating the fact that trapping harvest is not evenly spaced on a trapline. It appears from these figures that trapping efforts are more successful outside the park area, but factors that can possibly cause this variation, such as the relative effort of trappers maintaining lines inside versus outside the park area, and relative habitat suitability for individual species, were not evaluated in this study.

The overall location of Wiseman traplines does not appear to have experienced a high degree of variation over time, as traplines tend to be limited to the fixed geographic drainage system of the area. As was previously discussed, traplines other than marten lines frequently follow drainages for relative ease of travel, and to trap predators moving along or crossing the drainages. Traplines in the park area, except for the most northern area where the lines were established by the current trapper, have been passed along from family members or from the previous trapper. One of the current households trapped in the area prior to 1980, exclusively in the park area. Four other Wiseman trappers trap lines acquired from family members who were trapping them prior to 1980, and include areas both inside and outside the park area. This accounts for 63% of the total trappers.

As was previously discussed, the location of game harvest is affected by agency regulations regarding season of harvest and method of access to the various land areas. Therefore, I developed a survey matrix depicting game species harvested, months of harvest, distance range of harvest, and methods of transport used for the harvest, to provide a detailed picture of spatial aspects of game harvest over time. However, although the Wiseman residents who responded (68% of the community) put significant effort into trying to provide this information, the level of detail I requested was too great to assume a high degree of accuracy in responses. Residents stated that they did not trust their memories for this level of detail, particularly for the years further in the past. Additionally, the past harvest information of the now-deceased Wiseman old-timers could not be presented. When I requested further detail in this matrix in the second follow-up survey, I found some discrepancies between the initial data sets and the more detailed data sets. Residents pointed out that both the designated time frames (before 1980 and after 1980), and the designated boundary (inside and outside the park area), were not methods of dividing activity that they were accustomed to. Residents felt that hunting occurs on a continuum, as opposed to before or after 1980. They also felt that neither the game nor the hunters recognized land boundaries in the past: harvest was not specifically remembered as being either "inside" or "outside" the area of the park and preserve. Given these limitations to the data, the information contained in the following tables, Tables 16 to 26, is presented in order to give a general indication of spatial and temporal aspects of game harvest of the Wiseman community. The tables include information regarding actual harvest only. They do not include information on attempted harvest. The following is an abbreviation key for transportation methods used in game harvest:

SM = snow machine F = foot travel PD = pack dogs
T = truck/car DT = dog team
AIR = aircraft 3W = three or four-wheeler

**Table 16**
**Method and Month of Wiseman Community Harvest Occurring Before 1980***

| Month | Moose | Dall Sheep | Caribou | Black Bear | Grizzly Bear |
|---|---|---|---|---|---|
| October (freeze-up) | | | | | |
| November | | | | | |
| December | | | | | |
| January | | | SM | | |
| February | | | SM | | |
| March | SM | | SM | | |
| April | | | SM, T | SM | |
| May (break-up) | | | | AIR, 3W, F | |
| June | | | | | |
| July | | | | | |
| August | AIR, T, 3W | AIR, T, F | AIR | | |
| September | AIR, T, 3W, F | AIR, T, F | AIR, T | AIR | |

* Both inside and outside the park area.

**Table 17**
**Method and Month of Wiseman Community Harvest Occurring After 1980***

| Month | Moose | Dall Sheep | Caribou | Black Bear | Grizzly Bear |
|---|---|---|---|---|---|
| October (freeze-up) | | SM | T | | |
| November | | SM | SM | | |
| December | | | SM | | |
| January | | | SM | | |
| February | | | SM | | |
| March | SM | SM | SM, DT, T | | |
| April | | SM | SM, DT, T | SM | |
| May (break-up) | | | | AIR, SM | AIR, SM, DT, T |
| June | | | | | |
| July | | | AIR, T | | |
| August | AIR, T, 3W | AIR, T, 3W, F, PD | AIR, T | | |
| September | AIR, T, 3W, F, PD | T, 3W, F, PD | AIR, T | T, F | |

* Both inside and outside the park area.

Tables 16 and 17 show that from October to May (between freeze-up and break-up), the primary means of transport for game harvest both before and after 1980 is the snow machine. This corresponds to the greater ease of access afforded by adequate snow cover and frozen waterways, as was discussed in the sections on hunting and trapping activities. Both Dall sheep and caribou have been harvested in more winter months since 1980 than before 1980. This could possibly be due to the fact that the current Wiseman population is now younger and more mobile that the past population. Three wheelers have been used to harvest moose both before and after 1980, and Dall sheep after 1980. According to these tables, dog teams and pack dogs have only been used by current Wiseman residents in game harvest activities since 1980. Apparently, dog teams and pack dogs were used in the area by past Wiseman residents before 1980. Both before and after 1980, aircraft have been used only in May, August, and September to access game harvest areas, and additionally in July since 1980. All listed game species except grizzly bear have been harvested using aircraft as a method of transportation both before and after 1980. Grizzly bears have been harvested since 1980 using aircraft as a transportation method. According to tables 16 and 17, June is a month in which no harvest of the listed species is reported to have occurred, and only caribou have been harvested in July. The following tables, tables 18 to 26 show that three wheelers are not utilized extensively for game harvest in general. This is probably due to the fact that state statute prohibits their use within the corridor for harvest purposes.

**Table 18**
**Approximations of Spatial Aspects of Moose Harvest by Current Wiseman Residents Occurring Before 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| **Months of Harvest** | September | None recalled by current residents |
| **Closest Reported Distance from Wiseman, and Methods Used** | 5-10 miles<br>AIR, T*, 3W, F | None recalled by current residents |
| **Furthest Reported Distance from Wiseman, and Methods Used** | 45 miles<br>AIR | None recalled by current residents |

* Residents explained that trucks and three-wheelers are used to drive up the Wiseman-Nolan Road, then access to the park is gained on foot.

**Table 19**
**Approximations of Spatial Aspects of Moose Harvest by Current Wiseman Residents Occurring After 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| Months of Harvest | March, August, September | March, August, September |
| **Closest Reported Distance from Wiseman, and Methods Used** | 5-10 miles<br>SM, 3W*, T*, F | < 5 miles<br>T, 3W, F, PD |
| **Furthest Reported Distance from Wiseman, and Methods Used** | 20-40 miles<br>SM | 125 miles<br>AIR |

* Residents explained that trucks and three-wheelers are used to drive up the Wiseman-Nolan Road, then access to the park is gained on foot.

Since 1980, aircraft are no longer used in the park area, but moose have been harvested in March and August. Regulations allowing the spring moose harvest were implemented in 1984 (Hunter 1993). Although it appears that moose harvest occurred only in the park area prior to 1980, current residents note that the moose close to Wiseman were left for the old-timers to harvest. Other factors that account for this may include variable moose population densities in the different drainages at

different times, and the change in intensity of areas used for harvest due to Haul Road/pipeline construction and establishment of the park. It appears that snow machines have been used to harvest moose in the park area only since 1980. Moose have been harvested on foot in the park area before and after 1980, and outside the park since 1980.

**Table 20**
**Approximations of Spatial Aspects of Dall Sheep Harvest by Current Wiseman Residents Occurring Before 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| Months of Harvest | August, September | August, September |
| Closest Reported Distance from Wiseman, and Methods Used | 5-10 miles<br>T*, F | 40-60 miles<br>AIR |
| Furthest Reported Distance from Wiseman, and Methods Used | 60 miles<br>AIR | 40-60 miles<br>AIR |

**Table 21**
**Approximations of Spatial Aspects of Dall Sheep Harvest by Current Wiseman Residents Occurring After 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| Months of Harvest | March, April, August<br>September, October November | August, September |
| Closest Reported Distance from Wiseman, and Methods Used | 5-10 miles<br>T*, 3W*, F, PD | 5-10 miles<br>T, F, PD |
| Furthest Reported Distance from Wiseman, and Methods Used | 70 miles<br>SM | 125 miles<br>AIR |

* Residents explained that trucks and three-wheelers are used to drive up the Wiseman-Nolan Road, then access to the park is gained on foot.

An extended Dall sheep season has resulted in a longer period of sheep harvest in the park area since 1980. Regulations allowing for a spring harvest of sheep were implemented in 1982 (Hunter 1993). Snow machines have replaced aircraft for long range sheep harvest in the park area. Before 1980, residents apparently did not go as far afield (40-60 miles) to harvest sheep, compared to after 1980 (125 miles). Sheep have been harvested on foot in the park area both before and after 1980, and outside the park area since 1980.

**Table 22**
**Approximations of Spatial Aspects of Caribou Harvest by Current Wiseman Residents Occurring Before 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| Months of Harvest | January, February, March, April, August | April, August, September |
| Closest Reported Distance from Wiseman, and Methods Used | 10-20 miles<br>SM | < 5 miles<br>T, AIR |
| Furthest Reported Distance from Wiseman, and Methods Used | 40-60 miles<br>SM | 125 miles<br>AIR |

**Table 23**
**Approximations of Spatial Aspects of Caribou Harvest by Current Wiseman Residents Occurring After 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| Months of Harvest | February, March, April, November, December | January, February, March, April, July, August, September, October |
| Closest Reported Distance from Wiseman, and Methods Used | 10-20 miles<br>SM | 10-20 miles<br>SM |
| Furthest Reported Distance from Wiseman, and Methods Used | 70 miles<br>SM | 125 miles<br>AIR |

Within the park area, snow machines have been the method of transport used both before and after 1980 for caribou harvest. Snow machines have also been used to harvest caribou closer to Wiseman since 1980. Distances current residents have traveled to harvest caribou are consistent within the park area, before and after 1980. The closest distance is 10 to 20 miles, and the furthest is 60 to 70 miles. Outside the park area, the maximum distance has remained constant, 125 miles, but the minimum distance away from Wiseman has increased from less than five miles before 1980 to 10-20 miles after 1980. This correlates with resident's claims that caribou have not migrated through Wiseman since 1976, and may also be due to restrictions on hunting in the corridor.

**Table 24**
**Approximations of Spatial Aspects of Black Bear Harvest by Current Wiseman Residents Occurring Before 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| **Months of Harvest** | April, September | April, May |
| **Closest Reported Distance from Wiseman, and Methods Used** | 5-10 miles<br>SM | < 5 miles<br>SM, 3W, F |
| **Furthest Reported Distance from Wiseman, and Methods Used** | 40-60 miles<br>AIR | 85 miles<br>AIR |

**Table 25**
**Approximations of Spatial Aspects of Black Bear Harvest by Current Wiseman Residents Occurring After 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| **Months of Harvest** | April, May | May, September |
| **Closest Reported Distance from Wiseman, and Methods Used** | 5-10 miles<br>SM | < 5 miles<br>SM |
| **Furthest Reported Distance from Wiseman, and Methods Used** | 10-20 miles<br>SM | 85 miles<br>AIR |

The snow machine has taken over from aircraft as transport method for black bear harvest for distances further from Wiseman in the park area since 1980. They have been used for harvest at closer distances in the park area both before and after 1980, however. Aircraft have been used consistently to support black bear harvest outside the park area, at distances further away from Wiseman.

On two occasions, residents said that they remember harvesting a grizzly bear in the Wiseman area before 1980, but were uncertain of the location and were uncomfortable with designating the harvest as either inside or outside the park area. Therefore, these harvests are not included in a table.

**Table 26**
**Approximations of Spatial Aspects of Grizzly Bear Harvest by Current Wiseman Residents Occurring After 1980 (68% household response)**

| Location | Inside the Park Area | Outside the Park Area |
|---|---|---|
| Months of Harvest | May | May |
| Closest Listed Distance from Wiseman, and Methods Used | 10-20 miles SM | 40-60 miles AIR, T, DT |
| Furthest Listed Distance from Wiseman, and Methods Used | 100 miles SM, T* | 40-60 miles AIR, T, DT |

* Trucks are used to transport snow machines along the Haul Road, then access to the park is gained by snow machine.

Patterns of grizzly bear harvest cannot be established from the information provided by Wiseman residents, because the specific locations of grizzly bears harvested prior to 1980 were not recalled. Grizzly bear harvest has apparently only occurred in May, using snow machines as the transportation method in the park area, and aircraft, dog team, and truck transport outside the park area.

To summarize, snow machines have been and are the most dominant method of transport for harvest activities in the area between freeze-up and break-up (approximately October to May). Aircraft were used to support harvest activities in the area in May, August, and September before 1980, and one aircraft is still used in these months as well as in July outside the park area. Both before and after 1980, moose and Dall sheep have been harvested by people walking in the park area. In general, long travel distances have occurred for caribou harvest inside the park area both before and after 1980. Spring hunts for moose (1984 implementation) and sheep (1982 implementation) in the park area have allowed for harvest at those times since the park was established.

Tables 18-26 illustrate that the park area has been utilized by Wiseman residents to harvest moose, Dall sheep, caribou, and black bear, both before and after the park was established. Table 14 shows current Wiseman residents' estimates of average dependence upon the park area for these game species since they have lived in Wiseman (43% moose, 67% Dall sheep, 28% caribou, 32% black bear, 57% grizzly bear).

Although intensity of use is not indicated in the tables, residents who were present in Wiseman at the time claim that they initially shifted their intensity of use away from the pipeline corridor during pipeline construction (1974-1976), then away from the park area when the park was established and aircraft were prohibited for use in hunting activity in the park. Subsequently, perceptions of stricter enforcement of the prohibition on the use of firearms, and of increased hunting competition in areas to the east of the community, have apparently resulted in a more intensive use of the park area for hunting activity. In 1992, Wiseman residents were able to hunt in the corridor using firearms, so residents focused on hunting in the corridor close to road

access and to the community. Apparently the Wiseman moose harvest was not negatively affected by non-resident hunters in 1992 (six moose were harvested in the fall of 1992, as opposed to three the previous fall when there was no firearm hunt). However, residents observed high moose mortality during the winter of 1992/93, apparently due to the unusually deep snow and because of collisions with vehicles on the Haul Road. Currently there is local concern that the moose population in the corridor has declined significantly, and there is again fear regarding potentially high hunting pressure in the upcoming 1993 fall moose season.

Residents anticipate future recreation development in the corridor will cause an increase in the number of sport hunters in the area, thus increasing hunting competition. Residents conjecture that they may therefore increase their use of park resources, as there is no competition for resources in the park.

## D. Cash Income and the Local Economy

The local economy of Wiseman is a mix between cash gained from the sale of renewable resource products, income gained from self employment or wage jobs occurring inside and outside the area, and the household use of renewable resource products. Table 27 presents cash income sources that current Wiseman residents have used at some point since they have lived in Wiseman:

**Table 27**

**Sources of Cash Income in Wiseman**

| Local | Non-local |
|---|---|
| Trapping:<br>• sale of furs and fur articles<br>• sale of craft articles and jewelry<br>• tanning<br>Tourist services<br>Cabin and campground rental<br>Cooking for campers<br>Coldfoot truckstop<br>Road construction<br>Mining camps<br>Sale of artwork<br>Hunting guide (not a current activity)<br>Current Potential Year-Round Positions:<br>• DOT employment<br>• Coldfoot truckstop<br>• Mining | Commercial fishing<br>Logging (not a current activity)<br>Trucking<br>Tourist services<br>Cannery work (not a current activity)<br>Construction |

During the study period, commercial fishing was the only regularly scheduled seasonal activity outside the area. Non-local jobs such as trucking and construction work were taken during the study period by several households only when these could be obtained, as opposed to on a regularly scheduled basis. Members of one household moved to another area of the Brooks Range to run dogsled trips for tourists during the study period. The local income-producing economy is built around the sale of furs and products made from renewable resources, tourism, road construction work, some tanning, and occasional work in both Coldfoot and at local mining camps.

Two of the current Wiseman households run spring dogsled trips for tourists. One household operates the Wiseman Trading Company, which caters to tourists and locals in the summer season, and sells limited merchandise on a year-round basis. One household rented rooms, tent sites, a cabin, and provided food for renters in the 1992 summer season. Two other households worked somewhat in the tourist industry, helping out with dogsled trips and tourist shuttles. A family member of one household spends a lot of time skinning animals and sewing fur articles to sell to locals and tourists, and two other households are active in making jewelry. Two households create artwork, and sometimes sell it. One household tans furs for sale, and for trade.

Road construction, both on the Haul Road and on the Wiseman Road provided wage employment for some Wiseman households in the summers of 1991 and 1992. This has been contract employment. Apparently much of the road construction work is union labor, and residents must weigh up the benefits of continually paying union fees against the possibility that jobs may open up in the local area. At the present time, no Wiseman household had secured a job with the state DOT. Coldfoot Truckstop provides work for residents. Apparently there is a high turnover of employees at the truckstop, and Wiseman residents sometimes fill in as demand warrants. For example, one Wiseman resident was hired in Coldfoot in the spring of 1992 to help clear snow during break-up. Another was hired for a short period in the late summer and fall of 1992 to help with the fuel service station.

Mining plays a less significant role in the Wiseman economy than in historical times. Two households spoke of going to work for a miner up on the Hammond River in 1992, but this never occurred. Two current Wiseman residents used to work at claims in Nolan. Another resident tried mining in the summer of 1992, and the one

household who owns a claim allowed someone from outside the region to work their claim. At the end of the study period, one household had started working full-time at a local mining operation in Nolan.

The percent ranges given by participating Wiseman households for how cash income was earned are as follows. On a community basis, Wiseman residents said that self-employment or wage income contributed 20% to 100% of household income, the sale of furs contributed 0% to 60%, and the sale of articles made from renewable resource products could contribute between 0% and 20% of the household income. Residents receive dividends from the Alaska permanent fund. The level of transfer payments to the community is unknown, but these could include unemployment benefits, food stamps, and aid to dependent children.

These income percent contributions to household income, particularly self-employment/wage income and income from the sale of furs, are said to be highly variable. "Some years are better than others," I was told, in terms of income gained from locally harvested products. Apparently the amount of cash income from employment in any one year fluctuates. In addition, the trapping harvest itself is highly variable from year to year, as was described previously.

The method of sale of fur has a significant effect on the percent of income that trapping activity represents. When possible, furs are sold privately at a higher price than can be obtained from a fur buyer in Fairbanks. For example, a tanned wolverine fur may sell for $500 in Anaktuvuk Pass, whereas an untanned wolverine pelt may sell for $150 to $250 in Fairbanks. Wolverine fur is scarce in Anaktuvuk Pass, and highly valued for making ruffs. Wiseman trappers may therefore try to sell furs in Anaktuvuk Pass. Furs also earn a higher price when they are tanned and made into articles. Wiseman trappers that have the time and ability to make fur articles prefer

to do so as demand warrants. Often the best furs are retained for such use, and therefore earn a significantly higher price for the household than if they were sold in one piece to a fur buyer in Fairbanks. This activity combines the contributions of trapping and manufacture of articles to household income.

Wiseman trappers said that if the Haul Road was officially opened, their trapping activity and effort would not change. They feel that they already try to harvest as many furbearers as they can on a sustainable basis. They feel that the factors previously described as "trapping harvest variation" have a much greater influence on their trapping effort than fur price or the fur market. To date, they have found that Haul Road tourists do not represent a big fur market. A resident conjectured that if the Haul Road is officially opened to the public all the way to Deadhorse, increased traffic may cause species such as wolf and wolverine to move further away from the road. To account for this change in area utilization, traplines may be extended if there is "open" territory to extend them into.

The importance of furbearer harvest to a household's income is only one indication of household dependence on trapping. This measure does not take into account social dimensions of trapping such as staying active outdoors through the winter, and providing a connection to the land and resources. Also, the concept of percent of income does not take into account the local value of furbearer products. Fur hats, mittens, and ruffs are considered necessary outdoor gear by residents in the subarctic winter, and pelts and some furbearer carcasses are shared among the community through being given away or bartered.

The range of percents given by households for dependence upon local renewable resources are as follows:

| | |
|---|---|
| Overall food supply: | 60% to 80% |
| Meat consumed: | up to 95% |
| Clothing, primarily winter gear: | 0% to 10% |

Three households said it was hard to calculate the percent of income and percent of food that comes from renewable resources, and it was difficult to determine how much of the household food was not from locally harvested resources.

Figures that were given for value of equipment used in resource harvest activities, such as snow machines, freezers, and three-wheelers, range from $21,600 (which includes the value of the single-engine aircraft owned by one household), to the value of a pickup truck and rifle. This equipment requires yearly operational costs of between $100 to $2000. All ten households own highway vehicles: there were 13 in town, 9 of which could make the round-trip to Fairbanks in 1992. Seven households own snow machines, and six own three or four wheelers. There are approximately 100 sled dogs in town. The Wiseman economy is further discussed in section C of Chapter XI in regards to the mixed subsistence/cash economy.

# VI. LIVELIHOODS OF OTHERS IN THE WISEMAN AREA

## A. The Nolan Area

### 1. Introduction

The area known as Nolan lies approximately seven road miles to the west of Wiseman in the Nolan Creek valley. Nolan Creek feeds into Wiseman Creek from the north. Nolan is accessible by turning off the Wiseman access road onto the Wiseman-Nolan road. The eastern boundary of Gates of the Arctic National Park lies just to the west of Nolan. Map 2 illustrates these relative locations.

The history of the Nolan area has been discussed previously, Nolan Creek being a rich mining location that attracted people to the area. A current Nolan resident describes sinking a shaft beside Nolan Creek, hoping to find gold that the old-timers had left. They dug down to bedrock, only to find previously-dug tunnels, now choked with ice. He thought that these tunnels extended all the way to Wiseman Creek, a mile and a half "downstream."

Mining is still an ongoing concern in the Nolan area, and is the economic base of the settlement. Apparently most of the ground is covered by mining claims, with active operations in Nolan Creek, Smith Creek, and on benches above Nolan Creek. Some of the cabins from the previous mining era, which began in 1907, still exist and are inhabited by present-day Nolan miners.

As was explained in the section describing the human population of the Wiseman area, the population of Nolan varied during the study period. Two households lived in Nolan throughout this period, one who has been mining in the area for about twelve years, the last five years on a year-round basis. The other had been in the area for a year at the beginning of the study period. Two other households who also consider Nolan to be their permanent residence have been living in the area for about ten years, and both spent some months outside the area during the study period. Two households commented that in a general sense, Nolan has had a relatively stable population of about fourteen over the past decade.

Three full interviews were conducted with Nolan residents during the initial interview process in January/February 1992, and members of five other individual households in Nolan were contacted during the study period and at least briefly interviewed.

## 2. Use of Local Renewable Resources by Nolan Residents

Two of the three households fully interviewed in Nolan did not consider themselves to be "subsistence users" of the local resources, but stated that this may or may not change in the future. The following resource harvests for 1991 presented in Table 28 were compiled from these three household surveys.

I perceived that a variation in quantities of renewable resources harvested by Nolan residents could be attributed to how many people were living in Nolan at a

**Table 28**

**1991 Renewable Resource Harvests of Three Nolan Households**

| Species | 1991 Harvest |
|---|---|
| Moose | 1 |
| Caribou | 1 |
| Grouse | 21 |
| Ptarmigan | 2 |
| Ducks | 3 |
| Squirrel | 1 |
| Grayling | 66 |
| Lake Trout | 14 |
| Pike | 6 |
| Spruce | 4-6 cords (for heating) |
| Blueberries | 10+ quarts |
| Lowbush cranberries | 3 quarts |
| Rose hips | 3 quarts |
| Raspberries | handfuls |

given time, and what their food preferences were. For example, the people who initially operated one of the mining claims at the beginning of the study period did not harvest local resources, but the people operating the same claim six months later said they would need three moose to feed their anticipated mining crew. From an overall standpoint, however, it seemed to me that there was a greater proportion of purchased meat in the three Nolan households that I fully interviewed than meat harvested locally. According to survey responses, food procured from local resources contributed between 5% and 70% of Nolan households' food supply. The five cabins I visited in Nolan in the wintertime all had oil burning stoves, but three of these cabins were also able to burn wood for heat.

Except for a mile-long trapline run by one of the resident teenagers at the beginning of the study period, Nolan residents were not trapping in January/February of 1992. One residents did trap in late 1991, prior to leaving the area for the rest of the winter.

Conversations with Nolan residents led me to believe that they lived in Nolan by choice. Members of two households noted that they were mining in Nolan because they appreciated having their privacy. Other comments were:

> "To me, this is one of the best lives you could live, but most people don't think that way. The conveniences, the TV's . . . hitting a bar . . . going out to eat . . . going dancing . . . that's their heaven. This is mine, and I don't think that too many other people feel that way anymore . . . people are not just going to come up here, live, and be residents for hunting privileges. It's not worth it. It's [the lifestyle] got to mean a whole lot more for you to put up with this type of life."

> "If you live in an area like this, you know you ain't going to make that much money, so it's a way of life for you, so you do it."

Given that all three of the fully-interviewed households said that 100% of their income came from their job, it seemed to me that, in general, mining is the activity that supports living in Nolan. One household said that he "does fine" mining now, so he does not financially need to trap.

### 3. Hunting Activity in the Nolan Area

Under federal and state regulation anyone may hunt with a firearm in Nolan, which is situated in a narrow strip of land between the western boundary of the pipeline corridor and the eastern boundary of Gates of the Arctic National Park.

According to one Nolan resident, you "would need a tape measure" to figure out where this area of land is located exactly in the Wiseman Valley. Apparently the Wiseman Valley has been used by local residents extensively and historically as a harvest area, particularly for moose. Local residents say that a lot of non-local hunters have come to hunt in this valley in recent years, as the Wiseman-Nolan road offers a way to get beyond the corridor. Not many such side roads exist off the Haul Road (Map 8).

Nolan residents were permitted to use firearms in the corridor in the fall of 1992. I heard that some Nolan residents engaged in hunting activities at this time, but this information was not verified. Nolan residents were not available when I went up to Nolan during my visit to Wiseman in September, 1992.

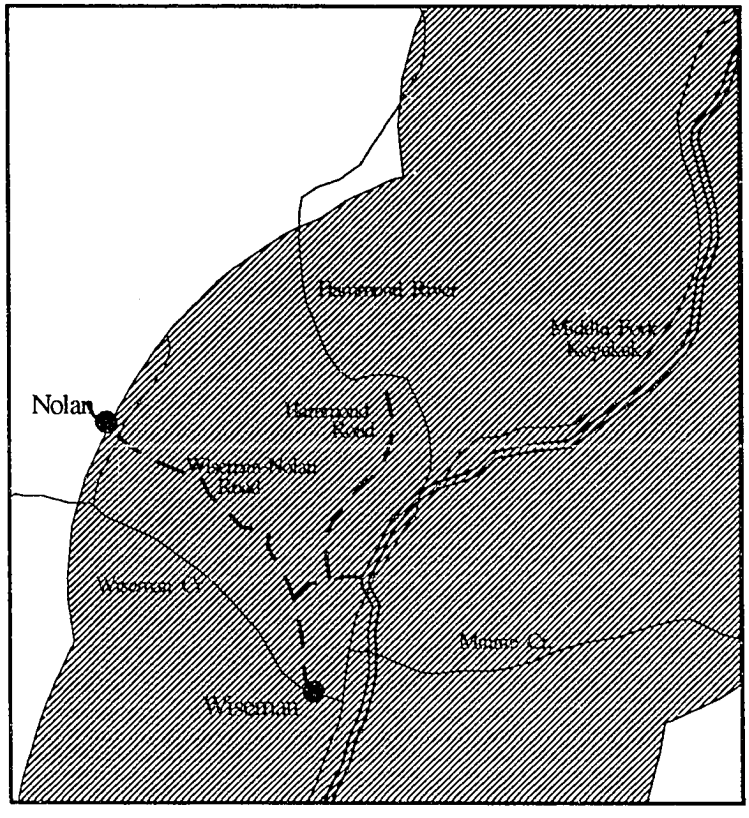
Nolan plays a role in overall use of renewable resources in the Wiseman area. Most importantly, the Nolan road provides hunting access off the Haul Road and beyond the five mile corridor, as well as access to park lands. Tables 16 to 26 and the text which accompanies them underscore the fact that access both beyond the corridor and to park lands is a local issue. Mines continue to operate in Nolan, and some of the miners harvest game animals in the area.

## B. Non-Resident Wiseman Property Owners

There are fourteen different Wiseman property-owning households who do not consider themselves permanent residents of Wiseman. This does not include the owners of the two Native allotments (continuing Native interests in Wiseman are

MAP 8

APPROXIMATE LOCATION OF WISEMAN ROAD SYSTEM



covered in the following section). The following is a summary of characteristics of Wiseman non-resident property ownership.

Fourteen total non-resident households:

Nine successfully contacted, all residents of Fairbanks.
Residency of others: Fairbanks, Seattle, Missouri, Oregon, California.

Twelve of the fourteen own habitable cabins.
Seven of these owners visited Wiseman during 1992.
Three of these owners rent out their cabins.

Two of the fourteen own remains of cabins.

Among the people I spoke with, I perceived the general attitude towards Wiseman to be one of both historic and present appreciation for the area. Except for the new owners of one cabin, the non-resident property owners seemed to have a relatively long association with Wiseman, dating back at least to 1955. Each person had their own stories of Wiseman, and Wiseman old-timers such as Vincent Knorr, Victor Neck, the Stanich brothers, the Slisco's, the Jonas family, Oliver Chappel, Smitty Wanamaker: people who were previous Wiseman property owners. They also knew the more "recent" old-timers: Harry Leonard, Charlie Breck, Ross Brockman, Tishu Ulen, and Mrs. Jonas.

Some of the information in the chapter on Wiseman's history came from these non-resident owners. It seemed that for the most part these people were drawn to Wiseman through connections (friends or family) with people who were year-round residents, or simply knew of the area. Many of the property owners I spoke with either have mining claims in the Wiseman area, or originally came to Wiseman with the intent of mining in partnerships. These people either lived in the area for a while, or visited the area off and on, and purchased cabins when they became available. One Wiseman property owner works mining claims in the area in the summers,

spending most of his time out on the claims. Seven of the properties were inherited by the current owners.

One property owner lived in Wiseman for eight to ten weeks in the summer from 1955 until about 1959, as her husband worked for the local road commission in the Wiseman area during that time. Another property owner says he lived in Wiseman from 1958 to the mid 1960's, initially for economic reasons. In the summer he would be seasonally employed, but in the winter he could not afford to live in Fairbanks. The main reason he stayed in Wiseman was economic, but he said he "learned to love it"; he just "really enjoyed the lifestyle."

Visits to Wiseman by these non-resident property owners generally tend to be short summer trips now, weekends or perhaps a week at a time. Two property owners sometimes stay longer: up to two months at a stretch in one case, and up to four months continuously in the other case. These two people visit Wiseman off and on at all times of year, although one says he visits more in the summer.

Property owners mentioned harvesting the local resources when they are in the area. Activities include berry picking, cutting firewood, hunting, fishing, and (in past years) trapping. One family described hunting and going on traplines in the area when visiting Wiseman friends. Since Gates of the Arctic was established in 1980, the family no longer hunts in the area, but they continue to visit Wiseman occasionally.

One property was sold during the study period; both the old and the new owners live in Fairbanks. The new owners of this property also own a tour company that runs 10 and 15-seater tour vans between Prudhoe Bay and Fairbanks during the summer tourist season. These people say that they have no specific plans for their property in Wiseman at the moment. The individual (one of four partners) I spoke

with said they are not in the lodging business, and are not interested in building their own facilities in Wiseman for overnight tourists on the stop between Fairbanks and Prudhoe Bay. They did not feel that the property is big enough for commercial development, but say they purchased it because they are interested in the area, both from the standpoint of historic value, and for personal recreation. Another non-resident owner would like to build a "nice house" on their property, and run small tourist trips in the area. However, he says he does not have the funding necessary for this venture.

As was noted in the chapter on historic livelihoods, the construction of the Haul Road brought change to the area. Non-resident property owners noted that they visit Wiseman a lot less now that the old-timers are gone. Many of these non-resident people served as bases in town for Wiseman residents when trips to Fairbanks were needed. Also, when the Wiseman old-timers moved into Golden Towers or the Pioneers Home in Fairbanks, the non-resident owners would often visit.

The non-resident owners of one property said they just don't know what they will do in the future in regards to the possibility of selling their land and cabin. "Perhaps" was the response when I asked if they are considering selling their property. If they don't need the money, they can't see selling it. Another land owner said that if the price was right, they might sell their cabin, but they have not considered selling, and would probably sell their house in Fairbanks first. Another said that they never contemplated selling: "There's so much nostalgia there." Still another claimed that "I have a lot of fond memories up there . . . I have a refuge to go to if I want." A different owner also has "deep personal roots on Wiseman," and can't envision selling the family cabin.

The attitude of Wiseman property being a financial asset/investment was not brought up by non-resident owners. At this time, the owners I was able to contact are not eager to sell their property. The interests of these owners tend to be historic and nostalgic. The properties are viewed more as a pleasant place to visit rather than as a base from which to harvest local resources. In general, resource use is not a significant factor in maintaining ownership of the properties.

## C. Continuing Native Interests in Wiseman

When Native Corporations were first formed after the passage of the Alaska Native Claims Settlement Act in 1971, Wiseman was located in the region encompassed by Doyon, a Native Corporation. However, Wiseman residents at the time apparently chose not to become part of the Settlement Act (Miller 1993), and are therefore not part of Doyon (ibid.). However, there is a Wiseman Village Traditional Council which is recognized by the Tanana Chiefs Conference, the non-profit Native Corporation for the region (ibid.). The Chief of the Wiseman Traditional Council owns one of the Native allotments in Wiseman and claims that there are forty-six members enrolled in the Traditional Council. None of the current year-round Wiseman households are members of the Traditional Council.

According to the Census Bureau, Wiseman is designated as an Alaska Native Village Statistical Area (U.S. Department of Commerce 1991). According to the 1990 Census information, an Alaska Native Village Statistical Area is defined as:

> Alaska Native Villages (ANV's) constitute tribes, bands, clans, groups, villages, communities, or associations in Alaska that are recognized pursuant to the Alaska Native Claims Settlement Act of 1972 [1971], Public Law 92-203. Because ANV's do not have legally designated boundaries, the Census Bureau has established Alaska Native village statistical areas (ANVSA's) for statistical purposes.
>
> (U.S. Department of Commerce 1991, A-2).

Nineteen percent (6 residents) of the total Wiseman year-round population at the time of this study are Alaska Native (Eskimo). Additionally, the brother of the individual who owns one of the Wiseman Native allotments lived in Wiseman in the spring and summer of 1992, occupying the cabin on the allotment. The mother of these individuals was Eskimo. Apparently this individual regularly stays in Wiseman for part of the year, and is reported to be the last person to actually be born in Wiseman. He remembers attending school there, along with his brother. At that time his brother remembers Wiseman as "primarily a mixed marriage community" with "hundreds of people charging all over the hills digging it up [mining]." Their household moved to Fairbanks when the school closed down. At this time they remember the "only ones who stayed in Wiseman did not have kids." These individuals also have mining claims in the area.

There is a long history of Native residents in Wiseman, described in Chapter IV. Eskimos and Indians lived in Wiseman along with the non-Native residents. Relatives of Tishu Ulen and Mrs. Jonas (Kalhabuk), relatively recent long-time Wiseman Native residents, maintain their interests in their Wiseman property. Stories are still told by current residents of Arctic John Etalook, who lived and traveled around the Wiseman area for many years. Rarely did I speak with people regarding the Wiseman community without these Native residents being mentioned.

## D. Residents of the Outlying Wiseman Area

I was not able to visit all of the mining camps that were operating in the summer of 1992. The people I spoke with who live for part of the year in the Wiseman area, exclusive of the settlements of Wiseman and Nolan, were all miners working mining claims in the Middle Fork of the Koyukuk River drainage system. Four of the five mining camps I visited had been mining "in the area" (described as the Upper Koyukuk area, including Gates of the Arctic National Park and Preserve) since the 1970s, and one of these since 1969. The fifth miner has mined in the area since 1986. Three of these groups of miners consider themselves out-of-state residents, the fourth has a permanent residence in Fairbanks, and members of the fifth mining camp have recently started to live in Fairbanks in the winter. Prior to this they lived on their mining claim in the Wiseman area year-round.

The miners I spoke with all felt that mining is not a growing industry in the area. Three people said the land was "all tied up," meaning there is little land on which to stake new claims. Another agreed that almost all the available creeks were already occupied with mining claims. However, the miners noted that mining is important to the area from an economic standpoint. One individual listed summer mining as one of the few employers in the Wiseman area.

Miners at one camp noted that Wiseman used to be more of a focus for the area when mail was flown in to the community. People from outlying mining camps would visit Wiseman to pick up their mail. These miners noted that they still occasionally visit Wiseman, and sometimes purchase food at the Wiseman Trading Company in order to support the local effort. Long time area miners and local residents seem to know each other. In general, people who live in the area

surrounding Wiseman interact with the community through visiting, making purchases at the store, and using the phone.

Two of the miners noted that the biggest change since they first began frequenting the area was the birth and growth of the Coldfoot truckstop. One individual notes Coldfoot as the cause of an increase in human population in the area, since the enterprise brings employees to the area.

None of those who I spoke with said that they hunted in the area, although people at one camp pointed out that they did burn wood for heat, picked berries, and harvested some vegetation from the area around their claim.

Miners on the Hammond River noted that they do not see many hunters come up the Wiseman-Hammond road, except for some of the local hunters. Two other individuals felt that hunting off the Haul Road was increasing: one person noted a definite increase over the last three or four years. Both of these miners expressed concern over the fact that they felt there was not enough enforcement of hunting regulations in the area.

Based on my conversations with these local miners, I concluded that the reason they returned to the area every year was because they liked the area, and enjoyed coming up to mine for gold. Hunting in the area was not a significant activity for them.

## E. Summary

The following table depicts the main interests for maintaining ties to the Wiseman area of the four categories of area residents:

**Table 29**

**Main Interests and/or Economic Base of People in the Wiseman Area**

| Category of Resident | Primary Interest/Economic Base |
|---|---|
| Permanent Wiseman Residents | Ongoing mixed subsistence/cash economic base. Dependence on local renewable resources. |
| Non-resident Wiseman Property Owners | Historic ties to the area, nostalgia. Generally very little use of local renewable resources. |
| Nolan Residents | Mining as an economic base. Some use of local renewable resources. |
| Area miners (primarily seasonal) | Mining as an economic base. Generally very little use of local renewable resources. |

# VII. CONDUCTING COMMUNITY-BASED RESEARCH IN RURAL ALASKA: THE WISEMAN CASE STUDY

Individuals participated in the Wiseman study voluntarily. The degree of success of the research relied upon this participation. In this study, I asked local residents to account for their use of public resources, which is a highly sensitive issue. During my initial winter visit to Wiseman I became increasingly aware of the extent of this sensitivity as I encountered hesitancy and occasionally refusal to participate in aspects of the study. This chapter provides detail on the evolutionary process of the Wiseman research methodology, which may be useful in future rural Alaskan community-based research. I attempted to engage and involve residents in the study so that I could first understand, and then present important resource use information in ways that recognized their perceptions of resource use patterns, and thus were acceptable to local residents. These details provide the necessary context for a thorough understanding of the data presented in the previous chapter.

I was repeatedly informed during my initial five-week visit to the area that this was the first time that residents could remember someone staying in the area to gain an understanding of resource harvest use and activities, as opposed to arriving in the area, asking questions, then leaving immediately. As I mentioned in the methodology section, I found that my extended periods of direct experience with local lifestyles and activities provided an invaluable framework for understanding the data I received from formal surveys and informal conversations. For example, my understanding of how the variation in weather and snow conditions affect trapping

harvest stems from my experiences traveling traplines, rather than just listening to verbal explanations of these factors.

As my visits extended over the course of a full year, I was able to observe and experience the local lifestyles in the major seasons of resource use and activity. This provided me with a relatively comprehensive understanding of the seasonal round of activities over the year and a half. This enabled me to address types of variation in resource use activities, as local residents responded to new agency regulations and game laws, varying weather conditions, potential increases in harvest competition from sport hunters, and variation in the amount of game seen locally.

In addition to directly experiencing opportunities and constraints of the local lifestyle, lengthy and repeated visits to the area provided for local credibility of both the research and the researcher. I used these visits to inform residents of the progress of the project, give copies of tapes, notes, and information summaries I had made to each respective household, and to ask for feedback at the various stages of both my thesis and the NPS report. I asked for this feedback as I felt that it was extremely important that all data contained in the thesis and the NPS report be accurate. In addition, this field check protocol provided opportunities for residents to comment on my work. I explained to residents that local opinions could not alter the conclusions that I drew from my research, but that if differences of opinion did occur between residents and myself regarding perceptions and conclusions, I would document and present these differences.

By asking residents to review the written stages of my research, I was providing opportunities for local residents to become more involved in the project. Individuals could see how I was using the information they provided, and how their comments were incorporated into my work. In addition, it was an attempt to avoid the

complaint I heard expressed by a local resident from another rural community that, to paraphrase, "we gave them accurate information, but they changed it when they wrote it in the report." I also provided copies of the thesis draft to both non-local Wiseman property owners and residents of the outlying area, so they could review the data and the way information was presented.

Only two Wiseman households had been contacted prior to the start of the study, and local residents had not been given an opportunity at the outset to participate in developing a research work plan, or been asked to provide input to the study process in any way. I initiated local participation in the study in October 1991 by asking residents to send me questions they felt were appropriate for the formal survey. At this point, however, the work plan for the research had already been written. By enabling residents to participate more thoroughly in the study process, I was hoping to instill some sense of ownership of the project by those being studied. In addition, my initial survey incorporated a section titled "perceptions on subsistence practices and management." All the questions listed in this section were covered during the interviews, but the conversations were allowed to focus on specific concerns of individuals.

I found that the opportunity for individuals to actively participate in the study promoted the gathering of accurate and complete data. An indication of this is the fact that many areas of uncertainty and inaccuracies in data presented were identified by area residents, instead of by me. For example, one Wiseman resident noted that I asked for information about "b. bear" harvests on the first follow-up survey that I had left in Wiseman for residents to complete. This individual noted that "b. bear" could represent "black bear" or "brown bear." As a result of this comment, I went back to all households for clarification of the information they submitted on "b. bear"

questions, and was able to split the data into information regarding "black bear" and "grizzly bear" harvests. In another incident, a resident reduced the size of an area of resource use when I asked for a review of the completed draft map.

As was mentioned in the methodology section, the protection of individual information is a sensitive issue, particularly since the human population of the Wiseman area is relatively small. I continually sought to present the data I collected in ways that would respect these desires for anonymity. For instance, community based percents were used to quantify response to survey questions, as opposed to individual household percents.

At all times my goal was to provide for an open process of information collection and presentation. Residents were not threatened by feeling that they were being forced to disclose information that they considered highly sensitive. Instead of pressing for individually sensitive details, I documented the reasons why such information was regarded as highly sensitive, then moved on. The issue of mapping resource use areas was pursued only after residents had input on presentation design, and did not feel threatened by the approach. The mapping of use areas is described in detail as it illustrates the process I used. At the April 1992 community meeting, we discussed the issues surrounding the mapping of resource use areas, and asked for ideas on techniques of presenting this information that would be acceptable to the community. I left a composite topographical map of the area with acetate overlays and marking pens in the community, so that residents could further discuss how to portray use areas. I returned to Wiseman later that week to follow up on the mapping efforts. I visited with all Wiseman community residents to clarify any areas of uncertainty regarding this portion of the study, and took the map and acetate around individually to residents for further discussion. The spatial representations of land

and resource use were developed by households individually during these visits. Residents outlined areas they use, and distinguished which areas were of *critical importance*, which were *extremely important*, and which were *important* to them in their resource use activities. The map of use areas and relative importance of those areas (Map 4) was produced by transposing information from the acetate overlays onto USGS topographic maps of the Wiseman area, including Gates of the Arctic National Park and Preserve. This map was then digitized and produced using a Geographic Information System. The final form of the map is accurate to scale, but is without physiographic reference points as local residents are highly concerned that by drawing detailed maps, their future use of renewable resources will be limited. The map represents a compromise between illustrating specific, detailed spatial information on resource use, and presenting a generalized use area.

In summary, the approaches I used involved frequent and relatively lengthy visits to the study area, observational and direct experience with local livelihoods, and local resident input in the research process. I remained open to local commentary on my work, made a sustained effort to document and respond to all comments, utilized data presentation formats developed cooperatively with residents, and respected desires to protect the anonymity of individual household information.

# VIII. PERCEPTIONS AND CONCERNS OF WISEMAN AREA RESIDENTS RELATING TO RENEWABLE RESOURCE USE

## A. Introduction

The preceding two chapters provide information regarding resource use, and methodological considerations regarding that information. This chapter reports on the perceptions, concerns, and attitudes of Wiseman area residents toward aspects of their lifestyle that pertain to the use of renewable resources. These include perceptions of the value of the local lifestyle, residents' ideology regarding resource conservation, concerns about agency management policies, perceptions and comments regarding eligibility and access to harvest resources, and concerns about the future of Wiseman children. I chronicled these from both formal interviews and informal conversations.

## B. Perceptions on the Value of the Local Lifestyle

In the initial 1992 survey of Wiseman area residents, nine of the ten household interviews addressed personal perceptions of the unique value of the lifestyle based on use of the land and renewable resources. In visits with all the area residents, it

quickly became evident that people had a distinct and deeply felt appreciation for their lifestyle (a lifestyle being defined as living a certain way by conscious choice). No distinction was made between "lifestyle" and "way of life." In all households, it was evident that this lifestyle was chosen by preference, not through default:

> "It has to be a certain type of a person that . . . is raised that way with subsistence . . . a person who has no real goals other than enjoying life . . . strong-willed enough . . . [does] not care about association with a lot of other people . . . a person has to have a certain mental mannerism to be inclined to do this [live the lifestyle] . . . There just aren't very many people that will do it."

> "The people that usually stay here . . . get acclimated to our customs . . . most of the people here fit into our lifestyle. They usually don't try to change our way of life too much."

> "You cannot live a 'subsistence lifestyle' down in the states [the lower 48] anymore. It is a rare thing now, and diminishing."

All of the Wiseman community households classified themselves as being dependent on the use of the local resources. It was evident from my conversations with these households that in order to survive in this area, they felt it was necessary to participate in activities centered around the use of renewable resources. One area resident acknowledged that the harvest of renewable resources had financial implications for local households (harvesting locally is cheaper than purchasing goods from distant supply centers), then continued:

> " . . . and then they enjoy it; that's one of the reasons they live here too, is to hunt and fish and trap. That's part of the lifestyle."

Another resident pointed out that my surveys focused on gaining specific information on the harvest and use of resources, and that I had no way of taking into account the intrinsic value of resource harvest trips:

> The experience of going on a trip is sometimes worth more than the meat

> that is brought back: trips have a priceless value, which cannot be measured by how many pieces of moose you now have. Backpackers and hunters pay a lot of money to go on such trips. It is hard to put a value on such aesthetic things.

It would not be fair to local residents to portray their lifestyle as romantic or idyllic. All area residents have individual preferences, opinions, and independent attitudes. However, I sensed peoples' deep appreciation for the land itself and its resources. Despite assorted grievances against various agencies, poor trapping seasons, a particularly long cold snap or exceptionally deep snow year, the lack of formal schooling for the children, or preferences for more contact and communication with people outside the area, there is still a pervasive attitude that this is a way of life well worth choosing:

> "I wouldn't want to live in town [Fairbanks] . . . this is home."

One stop on a trapline illustrates this appreciation of "home." I was out on a trapline with a trapper and one of his young children. We worked our snow machines up to a high point on a side hill above the valley floor. I listened:

> "This isn't a very good place for a [trap] set, but it's my favorite place in this area. Look around . . . "

The location afforded a spectacular panorama of peaks running up and down the valley. In the foreground ran the Trans-Alaska Oil Pipeline:

> " . . . We had to get used to the pipeline, but you never get used to the mountains."

The acquisition of skills necessary to maintain this lifestyle appears to be an ongoing process:

> "It's like learning anything - you have to go out and do it . . . you have to develop the skill." As with wolf trapping, "You have to personally obtain this experience."

> "People talk and they tell stories . . . it's sort of a word of mouth kind of thing . . . [the] different ways animals are utilized, . . . how to handle meat . . . the easiest ways and best times to do something . . ."

All residents interviewed had a personal and family history of hunting either in the Wiseman area, in another part of Alaska, or outside the State, depending on where the individuals were originally from. I perceived that many skills necessary for surviving far from population centers are learned through family ties, as well as through personal experience.

## C. Concepts of Renewable Resource Conservation

The following concepts of conservation represent local ideologies that were explained to me by residents. These concepts focus on attitudes and techniques that purport to provide for a sustainable harvest of renewable resources. These concepts may not be upheld by all, but my perception from numerous informal visits and conversations is that Wiseman residents are concerned about maintaining renewable resource populations, plant and animal, at levels which will support continuing harvests. Overall, it seemed to me that all residents felt that their current collective level of impact on the area's renewable resources ranged from negligible to being well below any limits of sustainability. Two comments illustrate this attitude towards resource conservation:

> "Conservation of resources is important. You don't just use them today and not tomorrow. Game needs habitat, so game and forests must be managed. You can

> harvest the excess of a population . . .The future of subsistence depends on game management and the management of renewable resources . . . so long as renewable resources are managed, not depleted, they will always be there."
>
> ". . . you have to have that regulation in your heart or brain . . . it's something you have to learn that you can't go out and catch all the lynx, or you can't go out and catch all the fox . . . certain years you try and catch as many as you can because there's a lot of them, and you want to get as many as you can because you're not going to bother them [the total population]; some years there aren't very many at all, and you've got to conserve them."

All of the Wiseman trappers who provided information spoke of the importance of regulating their own trapping activities to provide for continuing harvest. For example:

> "Trappers normally restrict their own trapping when animals are low on cycles. When the animals start building up, when it starts looking good, we'll begin trapping more heavily for them . . . "
>
> "Anyone who traps year after year is going to usually take care of their game. We have our own regulatory process . . . we slow down on trapping for certain species at certain times . . . the game managers are too slow to respond to these things [relatively rapid population fluctuations]. The trappers do these things on their own, normally."

The following techniques of trapline management were explained to me, and were pointed out when I accompanied people on their traplines:

> One trapper sets less traps on the line when the line is recovering [when species populations are low, and so need to build back up]. For example, he said he makes one trap set every two miles, instead of the four sets in a mile he may make when species populations are high.
>
> Not all of the trapline is utilized every year. Certain extensions and side drainages may not be used every year, depending on which species are low in population, and where the best habitat is for this species. However, in some of these areas that are recovering, several traps are set to maintain "ownership" of the area. As previously noted, there is a degree of trapping competition in the

> area, and it was said [somewhat facetiously] that someone will be on your trapline "in a couple of days" if you don't maintain evidence of active trapping.
>
> One trapper switches lines when certain species are low in population. Last year, for example, he did not trap his southern marten line since marten were low in population, but he used his western line, which is located in wolf and wolverine habitat.
>
> One trapper explained the concept of "reserve areas" for furbearer species. Extensions in a trapping area are left untrapped for certain time periods, and this will constitute a reserve area for species populations. Also, animals that remain in the brush line zone above the drainage bottom will rarely be trapped, since traps tend to be set in or close to the bottom of drainages (where they are more easily accessible by snow machines and dog teams). This brush line zone is considered to be an additional reserve area.

There could also be economic reasons for voluntarily decreasing trapping effort when game populations are low. A small or negative financial return on the use of fuel and equipment in setting traps and running traplines when furbearer populations are low could restrict trapping activity.

All three households that utilize wood yards in the area mentioned conservation practices in wood yard management. The remaining households cut dead wood along the Haul Road and pipeline. One wood yard I visited was a swampy area that initially had a high proportion of standing dead wood. Another wood yard was on an island in the Middle Fork of the Koyukuk, which also had a significant proportion of standing dead wood. A third wood yard I visited was a birch stand in a small drainage. Apparently, areas where trees have been killed by overflow also make good wood yards. The dead wood is cut, and the thick stands or clumps of timber around the area are thinned. This thinning process is accomplished by ringing the largest trees, and cutting them several years later once they are dead but before they have blown down. One resident explained:

> "Taking the big trees in those clumps of trees helps those little ones to grow."

Harvesting the larger trees would also seem to provide for more efficient harvesting effort.

Residents tend to use as much of a harvested animal as possible. In September while at a moose butchering site, one person asked the other resident who had shot the moose if he could have a substantial portion of the entrails, as they make good dog food. In another instance, one resident checked the site of another resident's moose kill, the possibility of scavenging in mind. Residents felt that all parts of the moose except the stomach were usable in some way. Even the antlers are utilized, usually to make hand-crafted articles, or to trade for beads which are then used to make crafts for sale. One resident commented:

> Waste not, want not, is a very important philosophy of the lifestyle.

In regards to harvest activity in general, all households that participated in the formal surveys expressed concerns over the spatial aspect of conserving species populations:

> "Most people are conservationists, and they are not going to go and wipe out future game populations by hunting the same area year after year after year."

This sentiment was also specifically expressed in reference to fishing, trapping, wood harvesting and berry picking.

> If you use certain areas lightly every year . . . the population of the species you are fishing or trapping or hunting will stay at a good solid base. . . If you just trap one spot every single year, or hunt in one spot every single year, you are going to wipe everything right out.

Three households specifically mentioned that if they were confined to, or assigned areas where wood cutting was allowed, clear cutting of those areas would result.

## D. Local Concerns About Agency Management Policies

### 1. Spatial Patterns of Renewable Resource Use

The overwhelming assumption of Wiseman households was that agency managers, primarily the NPS, were planning to designate "subsistence resource use areas" for the local residents. The following comments illustrate the widely-held belief among residents that their use of resources should not be confined to designated areas:

> " . . . Drawing lines and boundaries on maps of use areas, which are subject to change with animal/game population dynamics - I'm not really into that."
>
> "You can't map subsistence . . . in any way, shape, or form. If the caribou are on [Ernie] Pass, that's where the people are going to hunt caribou. If they [the caribou] were in Wiseman, they [people] are going to hunt them in Wiseman."
>
> This area, the Arctic, is sparse country, and you do not want to be boxed in to areas of use. You do not always want to cut wood in the same area. Resource use shifts. You will have to trap beaver, for example, if there are no rabbit and lynx. You have to have places to switch to. Just because an area has not been used or needed before for subsistence resource harvest, this does not mean that it will not be needed later.

It became obvious to me through many conversations that residents deemed the ability to harvest resources wherever they occur as critically important. It is

interesting to note that the Koyukon Indians of the region were noted to have had a " . . . mobile settlement pattern, which had followed their annual subsistence round . . ." until permanent village settlement in the 1940s (Clark 1981, 597), and the Nunamiut Eskimos also used to lead " . . . a semi-nomadic existence . . . [when caribou were not available] they shifted to other resources and if necessary to new resource areas" (Spearman 1979, viii). Residents felt that areas of use are subject to change with changing population dynamics; resources themselves are mobile, and do not respect zone boundaries. This is especially true for game, although the availability of harvestable vegetation also apparently varies in location and abundance from year to year. Residents feel that they have a vested interest in resource populations, and they do not want to eliminate future resource populations by harvesting from the same area year after year.

I frequently heard the opinion that the current level of impact on renewable resources by Wiseman area residents is slight. If they hunt, fish, and trap lightly in varying areas, residents think that resource impacts would remain slight. Because of this, residents feel that they should not be limited to harvest areas.

Based on the preceding section regarding concepts of conservation, it is evident that residents are aware of harvest techniques they feel promote sustainable resource populations. In 1992 I was aware of three instances where social pressure was brought to bear on hunters in a way that illustrated community self-regulation. Community members whose harvest practices were not based on household need were reprimanded by other community residents.

## 2. General Eligibility for Resource Harvest

All residents felt that cash was a necessary element in their lives. Cash is needed for items such as flour, sugar, clothes, and snow machine fuel, and for paying medical bills, for example. Without cash, one household noted: "[you] would be depriving your kids of a healthy childhood."

However, questions regarding income levels were not well received by Wiseman residents, and I perceived there was a very distinct rejection of the idea that level of income should be used as a criteria to determine who was eligible to harvest resources in the assorted land management areas surrounding Wiseman. One resident felt that questions on income have no relevance to a study on resource use activities, and another stated: "You can't put lifestyle against economics." Residents pointed out, however, that Wiseman lacks a local stable cash economy, and people will not stay in the area if there is no work. As a result, residents recognized that they often need to leave the area to earn cash income. This recognition is reflected in the local definition of a full-time resident, as is described in the following section.

## 3. Determining Permanent Residency

Only full-time, or permanent residents of Wiseman are eligible to harvest renewable resources in the park. Local residents described permanent, or full-time residency in Wiseman as follows:

"Somebody who is here most of the year, except for going away to work for

a short period of time somewheres."

A full-time resident would have all their mail delivered to the area, including their bills. They would live in the area year-round, except for when they go off to work. They would not 'close up shop', but would leave 80% of their stuff in town.

Anyone who lives in the area in December and January " . . . because if they had anywhere else to go [during these months], they're probably going to be there."

## 4. Defining Customary and Traditional Uses

I asked local residents to define "customary and traditional," as the phrase is used in the Code of Federal Regulations in the determination of eligibility of a resident zone to harvest park resources. The area or community must have "significant concentrations of rural residents who, . . . have customarily and traditionally engaged in subsistence uses within a national park or monument." (C.F.R. 13.43 (a)(2)). ANILCA also defines "subsistence uses" as being "customary and traditional uses" (Sect. 803 PL 96-487, 1980).

Respondents generally took some time to consider how to define this concept. During the interviews, I felt that no one had a previously conceived definition for "customary and traditional." For example:

"Customary" means handed down. Customary and traditional is how people in the area would normally utilize the resource. Technological advances have changed use patterns.

Customary is the usual use of a resource by white folks. Traditional use is by Natives, passed down through generations.

> Customary is something you are used to doing. Traditional is something your ancestors did.
>
> "[You] can't define it . . . because you've got two different definitions for customary and traditional. People need to harvest the animals now, not what they did one hundred years ago. People need the resources now. They need the fur for ruffs and wood for firewood and meat to eat . . . all these resources are renewable. Whatever resources they were harvesting one hundred years ago has no bearing on what [we use] today."

## 5. Sport Hunting

Those who are eligible for particular priority "subsistence harvests" must be distinguished from the rest of the hunting population, commonly called "sport hunters." I asked residents the question: "What is 'sport hunting' and how does it differ from 'subsistence hunting'?" Two households commented that there is no difference between "sport," "personal use," and "subsistence" hunting. The following is a sample of responses from residents who did feel there were differences between "sport" and "subsistence" hunting:

> Sport hunting is more for recreational pleasure than engaged in for essential need.
>
> Personal use harvest occurs in an urban situation, where people like to go out and hunt and fish for use at home in town: " . . . but that is as far as their tie to the land goes . . . they are not there on a daily basis, they don't watch a moose grow up, they just go out there and pick it off. They don't watch the smolt hatch and out-migrate, they just go there and dip them up. They like to participate, but they don't really realize all of what is involved with the resources."
>
> The game for the sport hunter is not as important a source of food as it is for the subsistence hunter, who is dependent on that food to a large degree.

> In speaking of a sport hunter: " . . . they hang it on a wall, we stick it in our freezer. That's two different things here. Where we go hungry, they go back with an empty corner in their ceiling where they could have hung their horns [had the hunt been unsuccessful] "

### 6. Attitudes Toward National Park Service Management

Comments and concerns raised by Wiseman residents regarding the management of Gates of the Arctic National Park focused on eligibility to harvest in the park area, levels of harvest, and access to harvest areas. Attitudes toward general eligibility varied among Wiseman residents. One resident noted:

> "This is all public land, and we are all taxpayers, and we all support the managing of these public lands, and if we are not allowed to use our own land we pay for through taxes, then there is something wrong. This is a free country, and everyone should be treated equally, no matter where they reside."

There is a significant concern over the continuing ability of Wiseman children to maintain the "subsistence priority" to harvest resources in Gates of the Arctic National Park. The current National Park Service policy that designates Wiseman as a resident zone (36 C.F.R. 13.64(a)(1)) enables these children to continue to have the opportunity to utilize resources in the park area. However, the concern is that this resident zone designation will be retracted in favor of a system of individual permits that would allow only the permit holder to harvest resources in the park. The individual permit was thought not to be transferable to children, resulting in a concern that "subsistence priority" eligibility would be cut off in one generation, and would eventually lead to the elimination of all "subsistence resource users" in the

park area. Residents were concerned that the individual use permit system would not allow people to move away from, then back to the area at a later date, and still maintain the permit. They felt that children should be able to visit or live in cities for a while, then come back to the area if they want, and still be eligible for "subsistence priority." Four households felt that individual subsistence use permits would be too easy to revoke: "If you don't dot the 'i' on your harvest ticket . . . can they revoke your permit?" One person detailed what he felt to be future possibilities:

> There is no reason to delete the rural resident zone, as there exists a significant concentration of subsistence users in the zone. (He defined significant as over 50%.) This percentage concentration may change in two years, twenty years, or one hundred years, at which point a permit or roster system may be instituted. On the other hand, the percentage concentration of subsistence users in Wiseman may never change.

Nolan is not listed as a "resident zone" for Gates of the Arctic National Park in the Code of Federal Regulations. I was told by locals that the reason for this is that there apparently was only one household living in Nolan when the park was established, and this household no longer lives there. However, as is noted previously, Nolan and Wiseman residents were closely connected historically, all using renewable resources of the general area. All of the Nolan households that I contacted felt that Nolan should be included in the Wiseman resident zone. The following quotes express this attitude:

> "The Wiseman area according to mining maps is the whole area of Coldfoot and all around. Wiseman is not a known town: the whole area is the Wiseman area." Rough boundaries of the Wiseman area thus described are Gold Creek to the north, Coldfoot to the south, the park to the west, and Big Lake to the east.

> Everyone that lives up here should be part of the resident zone ". . . so long as they are not abusing it [the resources] and not wasting it - that's what it's there for . . . It is ridiculous, crazy and stupid to allow people in Wiseman to hunt in the park, and not people in Nolan. We do the same things, we live the same way, we live closer to the park . "

Another question I asked residents was: "Should subsistence priority designation be extended to new individuals who have no current or historical familial or cultural traditions of subsistence hunting in the Wiseman area? In general?" Although residents recognized that all Alaskans have the right to hunt in Alaska, two households specifically felt that all Wiseman residents and their direct descendants should have "subsistence priority" in the park, to the exclusion of non-Wiseman residents. The following comment illustrates that there is not full agreement on this issue:

> "If a fellow that moves here from New York City and had no prior history in his lifetime as far as hunting and trapping, he has every right to learn and start."

One resident noted that:

> "Subsistence priority is just a priority in a stressed situation, or [in] a park . . . it does not have anything to do with taking away hunting if the populations [of game] are up there."

I developed an overall sense from contact with local residents that there was a lack of full comprehension as to why their consumptive use of park resources was an issue of major concern to the NPS. Residents felt that their impacts on such resources was negligible. For example:

> "We definitely aren't hurting anything."
>
> One household stated that the park covers a large area and the impact of Wiseman residents on the resources is insignificant. Even if Wiseman's population were to increase significantly, there would still be no significant impact on the park.
>
> According to another resident's recollections, forty or fifty moose were killed in the North Fork in the park before it became a park, and since 1980, five or six moose have been killed in the park. This resident said that pre-park harvest data show that park resources can sustain a "far higher harvest level."

Three households commented that they thought it inconsistent that snow machines were classified as customary and traditional in Gates of the Arctic National Park and Preserve, but aircraft and three-wheelers were not.

> One of these households recalls that about thirty years ago, his first moose hunt involved flying into what is now the park area with his father. He stated that aircraft were used for transportation in the area long before snow machines. His first recollection of a snow machine in the area was in Bettles in 1963. This resident has calculated that using an aircraft to haul game harvested outside the park area for short distances is more cost-effective than using ground transport: " . . . I don't feel that I should be penalized because I feel that I have wisely invested in a machine that I can utilize to lower my cost of living."

One household noted that they felt the park was "home." They felt they had a vested interest in "taking care of the park" and all the land surrounding Wiseman, whereas private visitors in the park did not have this vested interest.

Three households felt that subsistence users should be able to use the cabins in the park whenever they needed to. One comment noted was that: "winter shelters are vital to the subsistence users, and also to the visitors . . . it's life and death for them in a pup tent." In the winter, cabins can be used to dry gear out. Two of the households said they would help to maintain the cabins.

My perception from general conversations was that all households felt that park regulations are too strict. One example I heard at least three times was that it is illegal to cut green spruce boughs in the park, but residents need these boughs for dog and human bedding when they stay out overnight. Interestingly, on several occasions I heard comments from residents that the NPS should provide stricter enforcement of the ban on three-wheeler use in the park, particularly when used by non-local hunters.

To summarize, local concerns about NPS management are:

(1) Concern that the NPS will limit resource use to designated areas.

(2) Concerns that Wiseman's resident zone status will be replaced by an individual use permit system, resulting in children being ineligible to harvest park resources in the future, and permits being easily revoked.

(3) Concerns regarding the eligibility of people who move to the area and harvest park resources.

(4) Concern regarding the fact that the impacts residents are having on park resources, perceived as negligible by local residents, are not taken into account in NPS management policies.

(5) Concern that park regulations regarding, for example, cabin use and spruce bough harvest, are too strict, yet enforcement of hunting regulations and three-wheeler use by non-locals appears somewhat lax.

## 7. Attitudes Toward Bureau of Land Management Policies

Comments and concerns raised by Wiseman residents regarding the management of the Haul Road corridor by the BLM focused on the 1974-1992 prohibition on the use of firearms in the corridor. The following are quotes and comments concerning the pre-September 1992 corridor land management situation:

> "Whoever made the rule should come out and pack a moose five miles."
>
> The pipeline corridor and park boundaries are hard to determine exactly on the ground: ". . . a few feet here, a few feet there, and you are in and out [of boundaries], and you're legal and illegal . . . probably [it would] be almost impossible to figure out where you're at if you went to court anywhere . . . [you would need] aerial photos and a map maker."

> "The corridor [land management situation] is a bummer. Nobody can hunt that corridor but the bow hunters. That's a joke because the only people that bow hunt are pure sport hunters . . . if someone would need meat, they would be a heck of a lot more inclined to buy a gun than a bow and arrow because your chances [of harvesting an animal] are really reduced with a bow and arrow."
>
> One resident said that there were "More moose wounded this year [1991] by sport hunters [with a bow and arrow] than were killed by Wiseman residents."

The concern that bow hunters are more likely to wound and waste animals than rifle hunters was echoed by at least three other households in Wiseman. Two households specifically noted that they were not opposed to a bow hunt in the corridor, but were opposed to the exclusive bow-only hunt.

Residents felt an acute sense of "unfairness" that non-local bow hunters could hunt on the surrounding land when they could not hunt with firearms in the same area. The topic came up without prompting in virtually every conversation I had with all area residents. Apparently only one individual in the area uses a bow to hunt with, and even then this individual prefers using a rifle. I was repeatedly told by almost every household that using a rifle is the commonly accepted method of harvesting game when the object of the harvest is to put meat on the table. There was an overwhelming concern that locals be able to obtain a "subsistence hunt" in the corridor. A "subsistence hunt," as residents explained to me, would involve the use of firearms, and would be limited to local area residents. The following comments indicate this locally-preferred plan:

> It would be "chaos up here" if the five mile firearm restriction were lifted for all hunters. There should be a zone for residents of the Brooks Range/Koyukuk to use firearms in the corridor between Fairbanks and Prudhoe Bay.
>
> ". . . give the residents here first crack at moose hunting . . . you have to

> have meat in order to survive, especially for growing kids. Then open it up to regular hunting, and manage the game and not worry about managing people anymore, and study the game population to make sure they are all intact."

The need for species population studies was echoed by another household:

> Not enough studies were done on the local fish and game populations, but they were aware of more game surveys being proposed for the area by the BLM. This resident added that they hoped that the BLM biologists were listened to by their bosses.

Nolan residents also repeatedly referred to the need for a local priority hunt:

> People up here [in the area] should have first rights [to hunt], but the wildlife belongs to everyone. [I] don't know how to do this, [solve this inconsistency], but you can't take people's lives away from them: then you will have a bunch of unhappy people living in Fairbanks.

In contrast to these pre-September 1992 concerns and comments, it was evident on my visit to the area in September of 1992 that all households were enthusiastic about the lifting of the firearm prohibition for local residents for hunting moose, sheep, and caribou in the Haul Road corridor.

Three Wiseman households specifically pointed out to me that recent BLM regulations prohibited the harvesting of green timber within three hundred feet of the centerline of the Haul Road, and from within fifty feet of streams. These regulations could potentially affect the ability of residents to harvest wood from along the Haul Road, from islands in the river, from riparian areas, and from cutting sweeper trees (which are usually green) on undercut banks. These areas account for almost all of the local firewood harvesting activity: although area residents primarily cut dead wood from these areas, in some instances green timber is ringed, then cut when dead.

Substantial concern was raised regarding the BLM's recreational management plan for the Haul Road corridor. Two households expressed anger that they had not been

made aware of the plan before it was finalized, and that they did not have the opportunity to give public input. Concerns were raised regarding the impacts that the developments proposed by this plan would have on their lifestyle. One resident described the potential impacts of the construction of a corral at Gold Creek as an example of these concerns. He felt that the availability of a corral would encourage and increase use of the area. His concern is that horse parties would cross the Middle Fork of the Koyukuk and access the park through the Hammond drainage. This drainage system is trapped and hunted by local residents.

The proposed construction of NPS cabins and of a BLM administrative complex at Marion Creek was not looked upon favorably by any of the residents interviewed. They saw the complex as an unnecessary expenditure of the government's funds, and did not appreciate the construction occurring in an undeveloped area, particularly when the Coldfoot development node is located nearby.

One household suggested the following in regards to recreation management in the corridor:

> "BLM should be managing their lands with similar purpose to what Congress set up the park lands to be . . . they built a road [the Haul Road] right through the middle of the wilderness, now the BLM wants to turn it into a big strip-recreational zone. That goes in opposition to what the park [is for]."

To summarize, local concerns regarding BLM management in the area focus on:

(1) The need to provide and maintain a priority firearm hunt in the Haul Road corridor for local residents.

(2) The need for local fish and game population studies.

(3) The need for residents to continue to harvest wood in the corridor.

(4) Concerns regarding potential impacts that implementation of the recreation area management plan would have on their resource harvesting activities.

## 8. Additional Concerns Regarding General Government Agency Policies

Three of the nine households felt that if the renewable resources of the area were managed and used wisely, they will continue for thousands of years. These three households promoted studies of the renewable resources of the area, and not of the local human population.

Yet another concern specifically expressed was that individuals responsible for making policies that affected the lifestyle of local residents should come up and visit the area and the people. For example, a Nolan resident noted:

> "[Agency managers] are not up here talking to us individually, or seeing what's going on . . . Don't put laws on our lives without knowing what [these laws] are doing to us or how they are affecting us . . . You've got to know what you are doing to the people, you've got to know how it's affecting them . . . It would be like me sitting back here deciding 'well, we don't need their [the manager's] job titles anymore, so tell those people to go and get a new job. See ya, that's just the way it is' . . . Let us know your side and why you need to make these laws, and let us tell you our side, and how it's going to affect us. Maybe we can come up with a compromise. "

One household said that they felt agencies give the needs of "sport hunters" a higher priority than the needs of "subsistence hunters," as more money is collected from sport hunting tag fees, non-resident hunting fees, and the state's hunting guide businesses than is collected from "subsistence hunters."

## E. Concerns for the Future of Wiseman Children

A concern frequently expressed in many conversations regarded the uncertainty with which Wiseman residents view future opportunities for their children. I perceived that the ability to pass on to children knowledge and skills regarding the utilization of local resources, and having access to the land that supplies these resources, holds special significance and importance.

The original five Wiseman households with children all spoke of the importance of teaching this knowledge and these skills to their children:

> "It is the parent's obligation to teach their kids today to carry on our heritage for tomorrow, regardless of where they reside . . . I would definitely want my kids to carry on the family tradition."

> Regardless of whether or not his children choose to continue the lifestyle, ". . . they still would know what subsistence was about . . . it is kind of a cultural thing that's getting to be rarer and rarer, even in Native villages . . . there's actually a lot of kids in Native villages that don't participate in subsistence things much anymore; they've got the square box [the TV] to look at all the time . . . when kids don't even know what kind of fish are in front of their own village, it's getting kind of pathetic. I think it's pretty important that kids learn how to do subsistence things: learn about all the different life cycles of the animals and plants . . . the number of people doing subsistence things is diminishing."

Generally speaking, age dictates the extent to which children are able to participate in resource harvest and utilization activities. The youngest solo trapper I accompanied was aged fourteen, and I went out on traplines with eight and ten year-olds accompanying their father. I watched them clean snow off traps, set guide sticks, and snare a lynx.

# IX. HUMAN POPULATION GROWTH AND THE DEVELOPMENT OF TOURISM IN THE WISEMAN AREA

## A. Introduction

An increase in the number of residents in the Wiseman area could potentially increase the quantity of renewable resources that are harvested. The NPS is specifically concerned about the possibility of increases in the number of permanent residents of Wiseman, as this has the potential to increase the amount of resources harvested on park lands. As BLM's recreation area management plan is implemented, I anticipate a rise in recreational use of the Haul Road corridor. As facilities are constructed for recreational use, it is likely that more people will be impacting the area's renewable resources in the future, even though people may not come to stay. Development of the Wiseman area in general must therefore be examined. This chapter outlines local activities and perceptions related to Wiseman community development, and the potential growth of tourism in the area.

## B. Wiseman Community and Area Development

In general local residents do not feel that the Wiseman area will experience any significant growth in year-round human population:

> "There's people that can live this kind of a lifestyle, then there's a lot of people that can't, or won't . . . There's people that think they can live like this, but after trying it for a while, they decide that they like the comforts of town."

Seven out of the nine households surveyed in the initial survey process felt that the population of Wiseman, while subject to fluctuations, remains relatively stable over time:

> "Wiseman will change, but it will change real slowly like it's been doing . . . growing with family growth."

> "There's people that come here, try living here, and move away . . . There's been people come and people go . . . they stay a couple - few years . . . Basically there's people that live here all the time, and they're settled in here."

An element perceived to be a limiting factor to the area's human population is the lack of available land for purchase. The 25 private lots which average about an acre apiece in size, along with the 4.43 acre homesite and the two Native allotments (which total 143.93 acres) constitute the only land privately owned in the area. It is unclear whether or not local residents take in to account the possibility of subdivision and sale of the two Native allotments when considering the possibility of community growth. Wiseman land prices are now relatively high, generally attributed to the fact that there are few places where an individual can actually purchase land in the Brooks Range. Forty and sixty thousand dollars were mentioned by residents as prices for the less-than-acre lots that were for sale in January 1992 (the original purchase price from the BLM was much lower for the 1970s residents). Local residents seemed to appreciate these relatively high land prices, as they felt that the high prices prevented people from moving to the area. One individual noted, however, that such high prices prohibited him from purchasing lots on which his children could live in the future.

The price of Wiseman land coupled with the lack of utilities and public services in the community are thought to be effective inhibitors to large development-oriented companies coming into Wiseman to purchase land and set up tourist-based

businesses. Wiseman has no electricity, no sewage system, no running water, no school, no health services, one community phone, and no vehicle bridge access across Wiseman Creek to the south side of the village (where both Native allotments are located). People pointed out that it would be much cheaper for tourist businesses to lease land in the Coldfoot development node, where utilities and some public services are already available. In 1992 a mini-tour company did set up a cooperative agreement to have their clients stay overnight at the Wiseman Trading Company, but the first group of clients apparently did not appreciate the lack of amenities. On subsequent trips the tour clients stayed in Coldfoot, where most of the bus and van tours stay.

### C. The Development of Tourism in the Area

Tourism is highly dependent upon the presence of the Haul Road, as the road provides a direct connection for Wiseman to Fairbanks. Improvements to the Haul Road and the construction of recreational facilities, and the possibility of the road becoming legally open to the general public all the way to Prudhoe Bay, create a potential for an increase in the numbers of tourists who travel to the area. Recent improvements to the Wiseman road and the Wiseman-Nolan road have improved access to these settlements. Apparently Wiseman used to be accessible by road for only six months of the year.

The Arctic District of the BLM, which is responsible for managing the Bureau's land in the Wiseman area, give the figures listed in Table 30 for the number of tour buses and tour vans that were counted at the Yukon River Crossing on the Haul

Road. I was told by the District's Natural Resource Specialist that all tour buses and most of the tour vans counted at the Yukon River Crossing generally continue at least to Coldfoot, since the destination for most tours is Deadhorse/Prudhoe Bay. The numbers come from the District's recreation area management plan for the Dalton Highway (1991b, 8), and from the Outdoor Recreation Planner for the District.

**Table 30**

**Bus and Van Tour Traffic at the Yukon River Crossing, 1988 to 1992**

| Year | Tour Buses | Tour Vans |
|---|---|---|
| **1988** | 60 | N/A |
| **1989** | 83 | 80 |
| **1990** | 106 | 90 |
| **1991** | 120 | N/A |
| **1992** | 74 | 90 |

The Recreation Planner noted that the District does not expect bus groups to grow greatly in number in the future. She also said that the decrease in number of buses in 1992 was due to the fact that Gray Line, one of the two companies that operate tour buses on the Haul Road (Princess is the other, and larger, carrier) had invested this season in buses that were not capable of driving the Haul Road, and so cut back on their Haul Road operation. This same person noted that Coldfoot cannot currently provide accommodation for more than two buses at a time, although there have been three parties interested in building an overnight tourist facility at Chandalar, north of Coldfoot. Apparently bus tours have a specific and limited time schedule for Haul Road tours, and the Recreation Planner therefore does not envision Wiseman as a stop for these groups.

The Natural Resource Specialist for the BLM's Arctic District explained that there has not yet been any consistent methodology for counting traffic on the Haul Road, and that mechanical counts have so far proven to be unreliable. Given these limitations, the Specialist said there were 1200 private vehicles counted at Chandalar Shelf (north of Coldfoot) in 1992. This individual said that the general impression gained from the increase in trash picked up and outhouses pumped along the Haul Road by Arctic District employees is that the number of private vehicles on the Haul Road is increasing.

The available services in Coldfoot include a hotel, restaurant, fuel, and limited garage facilities. Sometimes a small store is open that has a limited selection of food, and in the summer the visitors center (operated cooperatively by the BLM, the NPS, and the U.S. Fish and Wildlife Service) and a jewelry/gift store are open. Coldfoot has an airstrip used by commercial operators (among others), but currently there are no scheduled flights. Coldfoot is a flagstop for air transport companies flying to the north slope, and may not be open to the wheel planes commonly used by these companies in the winter unless the runway has been kept cleared. It is therefore not always possible to access the area by routine commercial air carrier.

The services provided at Coldfoot are thought to concentrate non-local hunters in the area. One resident noted that Coldfoot has had an adverse impact on some local bird and mammal populations in the area. Black bears are currently said to be "scarce as hen's teeth" in the area, and a resident claimed that the now-closed dump at Coldfoot was in large part responsible for this low population. Apparently, the dump:

> " . . . pretty well annihilated the bears around Coldfoot . . . Every bear in about a ten to fifteen mile radius around Coldfoot's dump eventually ended up there and [has] been killed . . . ".

Wiseman mail comes through the Coldfoot Post Office, and is delivered to Wiseman once a week. Apart from this postal dependency on Coldfoot, Wiseman residents tended to view Coldfoot as a convenience rather than a necessity: "like a 7-11," as one person stated. Some households occasionally purchase fuel and food from Coldfoot, but residents made it clear to me that it was cheaper to order fuel and goods directly from Fairbanks. Once a year a fuel truck stops in Wiseman to deliver to those households who have the financial ability to purchase fuel in bulk. Bulk fuel in 1992 cost $1.30 per gallon delivered, as opposed to $1.50-$1.53 per gallon in Coldfoot.

In December 1991 the BLM released a recreation area management plan for their land in the Haul Road corridor. Management aspects of this plan are discussed in the following chapter, and local concerns regarding this plan were discussed in the preceding chapter.

Not all tourists on the Haul Road stop at Wiseman as it is located two and a half miles off the Haul Road on an access road. One resident noted:

> "Wiseman will not see a real large amount of tourists, because it is out of the way. Tourists want something easy and convenient on their way to Prudhoe Bay or wherever. It's real hard to say what's going to happen. Wiseman is too far off the Haul Road for a big company wanting to come in and build a hotel . . . "

Summer tourists to Wiseman tend to be visitors in private vehicles who come into the community, look around, and leave. While in Wiseman in the summer of 1992, I observed several non-local vehicles driving out to the airstrip and back, and now and then a few groups of visitors would wander around the cabins. The focus of these summer visits appeared to be the Wiseman Trading Company, where there were historical displays with articles set up for people to examine, and where someone was generally around to answer questions and provide customer service. Twice I met

backpackers on their way from Wiseman to Gates of the Arctic National Park via the Wiseman-Nolan road.

Wiseman attitudes towards tourism are varied. Residents who did not make an effort to gain any income from tourists generally were "neutral" in their attitudes towards tourism:

> "So long as people walk around town, gawk, and leave, then that is OK." Tourism is not important personally, but it may be to other households in Wiseman.

An adverse impact of tourism mentioned, however, was the increased amount of litter that was left around the community. Although one household feels that tourism is unwanted and unnecessary since they do not want the character of Wiseman to change, they do recognize that the influence of tourism will grow nominally.

Points made about the favorable nature of the local tourist industry is that tourists are seen as a "renewable resource" that have little negative on the area, but who provide a local source of income. This enables residents to stay at home while earning cash income.

> "One thing about the tourist industry: they come and they leave. They don't leave a mark. We have a ten week [summer] season for tourists here in Wiseman . . . a man could never make a living off tourists, but it does help."

Additionally, it was felt that any promotion of Gates of the Arctic National Park and Preserve as a tourist destination would bring an increase in the amount of tourists to the area:

> The amount of tourism will depend on how popular the park becomes, as well as on 'normal progress,' and the increase in visitation brought by the improvement in the Haul Road, the Wiseman road, and the Wiseman-Nolan road.

Two households commented that an increase in tourist developments in the area will result in an increased number of hunters coming to the area.

Nolan residents also addressed the issues of tourism and development in the area:

> Wiseman is a historic area, and the park is a natural attractor: "This area will be a tourist trap someday."
>
> The tourist industry is developing a lot faster than is desirable. The area will be mostly focused on tourism in the future. Mining will be shut down. Having tourists visit mining operations could be beneficial - visitors may spread the word that there is 'nothing wrong,' from an environmental standpoint, with mining.
>
> "It's nice to have the seclusion, and that's what I'm up here for, but I think they've [the tourists] got just as much right to see it [the area] as we do, so let them come up . . . they come, they see, and they leave, and that's all right with me, so long as they don't abuse the area when they are here."

Unlike my perception of full-time resident attitudes, area miners and non-resident property owners appear to feel that tourism will play a larger role in Wiseman's future. In general, non-resident property owners foresee tourism as becoming more and more important to local full-time residents, but of no importance to themselves. Given the historical value of Wiseman, they generally feel that Wiseman could become a tourist attraction. One person said tourism will grow in the area because the state is promoting tourism in general. Coldfoot was noted as being more "set up" for tourists, although two people felt Wiseman residents could develop a base for tourism in the community.

Area miners generally felt that the tourist industry in the area will grow significantly. One miner observed that the BLM is "geared for tourists," and is "pushing tourism" through its recreation area management plan and construction of the administrative site at Marion Creek. Another individual noted that there may be a rapid growth in the area due to an increase in numbers of tourists visiting the area.

One miner noted that Wiseman residents may be able to make some money off tourists, and that tourism in general was "okay," since it brings money into the area. Another miner said he was not affected by tourists, while people at another mining camp said they would be happy to have people visit their mine, as it would be good for public relations between miners and the non-mining public.

I found that tourism in general is seen as a benefit to some local residents, as tourists can provided a source of cash income. The local tourist industry currently involves dogsled tours, the Wiseman Trading Company, cabin rental, selling handmade articles in the store, the possibility of canoe trips on the Middle Fork of the Koyukuk, two campgrounds, and occasionally the selling of artwork, walking tours of Wiseman, and summer dog sled tours in Coldfoot. The total tourist season, which includes summer and spring dogsled tours, apparently lasts about eighteen weeks.

# X. LAND MANAGEMENT AGENCY POLICIES AND CONCERNS FOR THE WISEMAN AREA

## A. Introduction

Except for the private land in Wiseman itself, the land included in the Wiseman study area is managed by the NPS, the BLM, and the State of Alaska (see Map 2). In addition to the concerns of local area residents described in Chapter VIII, the land and resource use concerns of the two land managing agencies (the NPS and the BLM), and the State of Alaska's Department of Fish and Game, must be examined.

The federal government policy regarding "subsistence management" set out in Title VIII of the Alaska National Interest Lands Conservation Act states in part:

> It is hereby declared to be the policy of Congress that -
> (1) consistent with sound management principles, and the conservation of healthy populations of fish and wildlife, the utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources of such lands; consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for each unit established, designated, or expanded by or pursuant to titles II through VII of this Act, the purpose of this title is to provide the opportunity for rural residents engaged in a subsistence way of life to do so; . . .
>
> (Sect. 802, PL 96-487, 1980).

This policy is declared after a statement of findings (Section 801) in ANILCA. Part 1 of this section was previously quoted in Chapter I, and describes the essential nature of "continuing subsistence use opportunities" on public lands by rural residents of Alaska. These findings listed in Section 801 continue:

> (2) the situation in Alaska is unique in that, in most cases, no practical alternative means are available to replace the food supplies and other items

gathered from fish and wildlife which supply rural residents dependent on subsistence uses;

(3) continuation of the opportunity for subsistence uses of resources on public and other lands in Alaska is threatened by the increasing population of Alaska, with resultant pressure on subsistence resources, by sudden decline in the populations of some wildlife species which are crucial subsistence resources, by increased accessibility of remote areas containing subsistence resources, and by taking of fish and wildlife in a manner inconsistent with recognized principles of fish and wildlife management;

(4) in order to fulfill the policies and purposes of the Alaska Native Claims Settlement Act and as a matter of equity, it is necessary for the Congress to invoke its constitutional authority over Native affairs and its constitutional authority under the property clause and the commerce clause to protect and provide the opportunity for continued subsistence uses on the public lands by Native and non-Native rural residents . . .

(Sect. 801, PL 96-487, 1980).

As federal public land managing agencies, both the NPS and the BLM are required to uphold this federal policy.

## B. The National Park Service, Gates of the Arctic National Park and Preserve

Gates of the Arctic National Park and Preserve was established as a new unit in the National Park system by ANILCA in 1980. Section 201(4)(a) of this Act described the extent of the new unit, and some of the management purposes for which it was established:

> Gates of the Arctic National Park, containing approximately seven million fifty-two thousand acres of public lands, Gates of the Arctic National Preserve, containing approximately nine hundred thousand acres of Federal lands . . . The park and preserve shall be managed for the following purposes, among others: To maintain the wild and undeveloped character of the area, including opportunities for visitors to experience solitude, and the natural environmental integrity and scenic beauty of the mountains, forelands, rivers, lakes, and other natural features; to provide continued opportunities, including reasonable access,

> for mountain climbing, mountaineering, and other wilderness recreational activities; and to protect habitat for and the populations of, fish and wildlife, including, but not limited to, caribou, grizzly bears, Dall sheep, moose, wolves, and raptorial birds. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional, in accordance with the provisions of title VIII.
>
> (Sect. 201(4)(a), PL 96-487, 1980).

Section 701(2) of ANILCA designated an area of "approximately seven million and fifty-two thousand acres" as "Gates of the Arctic Wilderness."

This allowance for "subsistence uses" in Gates of the Arctic National Park by "local residents" sets these local residents apart from the rest of Alaska's population, and from the general population of the United States. This is because ANILCA mandates that national parks and monuments are generally closed to consumptive wildlife use:

> All national parks and park monuments in Alaska shall be closed to the taking of wildlife except for subsistence uses to the extent specifically permitted by this Act. Subsistence uses and sport fishing shall be authorized in such areas by the Secretary [of the Department of the Interior] and carried out in accordance with the requirements of this title and other applicable laws of the United States and the State of Alaska.
>
> (Sect. 816(a) PL 96-487, 1980).

Formal interviews and informal conversations during the study period with both the park Superintendent and the Subsistence Manager for Gates of the Arctic National Park provided insights to concerns they have regarding Wiseman residents' use of the land and renewable resources in Gates of the Arctic, in addition to general concerns of NPS "subsistence management."

One issue identified is the perceived conflict between the designation of most of the park as "wilderness," and the harvest of renewable resources in that wilderness. The Wilderness Act of 1964 in part defines wilderness as " . . . an area of

undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions . . . " (Sect. 2(c) PL 88-577, 1964). A wilderness area " . . . shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness . . ." (Sect. 2(a) PL 88-577, 1964).

The General Management Plan for Gates of the Arctic National Park and Preserve states that:

> The importance of maintaining the wild and undeveloped character of the area was reemphasized as Congress further designated over 7 million of the 8 million acres as wilderness and six rivers as wild. Within the broad spectrum of resources and opportunities reserved in national parks, only Gates of the Arctic was established with such strong emphasis on wilderness purposes. (NPS 1986, 3).

The National Park system is designed to benefit the national public, and the harvest of renewable resources within such a designated wilderness is apparently seen by some members of the national public as being incompatible with wilderness values. Considering the NPS is directed by ANILCA to permit subsistence uses by local rural residents in Gates of the Arctic National Park and Preserve, the concern, as stated by the Superintendent of Gates of the Arctic, is: "Can subsistence be conducted consistent with wilderness values?"

The Subsistence Manager for Gates of the Arctic expressed concern over the fact that many ambiguities exist within ANILCA. Both he and the park Superintendent point out that the phrase "natural and healthy" in Section 815(1) of the Act as yet has no legal definition: park mangers are supposed to permit "subsistence uses" of the resources within the park unless that level of use is or becomes "inconsistent with the conservation of natural and healthy populations, of fish and wildlife . . ." (Sect.

815(1) PL 96-487, 1980). Another example of an undefined phrase pointed to by the park Subsistence Manager is the term "significant concentrations." This phrase is used in the Code of Federal Regulations where resident zones for a national park are determined:

> The communities and areas near a national park or monument which contain significant concentrations of rural residents who, without using aircraft as a means of access for purposes of taking fish or wildlife for subsistence uses (except in extraordinary cases where no reasonable alternative existed), have customarily and traditionally engaged in subsistence uses within a national park or monument. For purposes of determining "significant" concentrations, family members shall also be included.
>
> (36 C.F.R. 13.43(a)(2)).

Apparently no definition or description of what constitutes a "significant concentration" has yet been incorporated as a policy, thus again providing no established guidelines for management decisions.

As was noted previously in Chapter IX, local park managers express concern over the potential for growth in Wiseman's population, as anyone who lives in Wiseman is eligible to harvest resources in Gates of the Arctic National Park. Given that Wiseman is accessible by road and that private land in Wiseman can be subdivided and/or sold, the park Superintendent and Subsistence Manager feel that the human population of the area could expand, potentially resulting in increased harvest levels of park resources. This is a contrast to the comments of local residents, who feel it is unlikely that Wiseman's population will increase significantly (see Chapter IX, Section B).

The Subsistence Manager stated that concerns over eligibility for harvesting resources within the park are not currently based on depressed renewable resource populations. However, this is in no way seen as providing an excuse to wait until there is a "resource problem" before eligibility is limited. The Subsistence Manager

pointed out that the harvest of park resources is most effectively accomplished by regulating both the number of people eligible to engage in such harvest, and the methods of allowable access to those resources.

The issue of allocation is the third of the "major subsistence management issues" identified by the park Subsistence Manager, the first two being eligibility and access. For Wiseman, the NPS apparently wants to know who utilized resources in the Gates of the Arctic area before 1980, when ANILCA was passed and the area became a new park unit. According to the two Gates of the Arctic park managers that I spoke with, if it is known who these pre-1980 users are, their use of the resources will be afforded primary protection.

The fifth declaration of findings in ANILCA Title VIII states that:

> (5) the national interest in the proper regulation, protection, and conservation of fish and wildlife on the public lands in Alaska and the continuation of the opportunity for a subsistence way of life by residents of rural Alaska require that an administrative structure be established for the purpose of enabling rural residents who have personal knowledge of local conditions and requirements to have a meaningful role in the management of fish and wildlife and of subsistence uses on the public lands in Alaska.
>
> (Sect. 801(5), PL 96-487, 1980).

Section 808 of Title VIII establishes Subsistence Resource Commissions for park and park monuments. According to this section, the Subsistence Resource Commission is charged to ". . . devise and recommend to the Secretary [of the Interior] and the Governor [of Alaska] a program for subsistence hunting within the park or park monument" (Sect. 808(a), PL 96-487, 1980). After submission of this "subsistence hunting program," Section 808(b) outlines the implementation process:

> The Secretary shall promptly implement the program and recommendations submitted to him by each commission unless he finds in writing that such program or recommendations violates recognized principles of wildlife conservation, threatens the conservation of healthy populations of wildlife in

> the park or park monument, is contrary to the purposes for which the park or park monument is established, or would be detrimental to the satisfaction of subsistence needs of local residents.
>
> (Sect. 808(b), PL 96-487, 1980).

Comments on the role of the Subsistence Resource Commission are included in Chapter XI, Section F.

Both the park Superintendent and the Subsistence Manager repeatedly emphasized the necessity of open communication between local residents and Park Service personnel: "Everyone must take a real effort to communicate their views, and understand the views of others." The Subsistence Manager expressed concerns that the exchange of information between local residents and Park Service personnel had not occurred. He feels that local residents need to understand the mandates governing NPS actions, and what the NPS is "all about," both in Alaska and in the lower 48 states. In addition, this individual said that NPS personnel need to learn what the local issues and "cultural attributes" of the local lifestyles are. In his view, there have been "incredible mis-perceptions" by both of these parties regarding these issues.

The following table summarizes the NPS concerns discussed here, and the concerns of local residents discussed earlier. These concerns may be different, but they are not incompatible.

**Table 31**

**Summary of NPS and Local Resident Concerns**

| NPS Concerns | Local Resident Concerns |
|---|---|
| Subsistence uses perceived by some as incompatible with wilderness values. | Subsistence lifestyle has intrinsic value, and should be maintained. |
| Need to regulate now to avoid future "resource problems." | Resident harvest activities have minimal or negligible impact on park resources. Avoid being limited to a resource use area. Strict regulations limit resource use in the park. |
| Growth of permanent resident population of Wiseman. | Desire to maintain resident zone status, protect children's ability to live the subsistence lifestyle. See no real permanent growth in community population. |
| Guided by principles of "natural and healthy populations" of fish and wildlife, and concerned with determining "significant concentration" level of rural resident users in a resident zone (ambiguity exists in definition of terms). | Guided by local ideologies of resource conservation practices to provide sustainable resource harvest. |
| Find out who in Wiseman used park resources before 1980, and apply as criteria for determining rights of resource use. | Community members will be able to utilize available resources, regardless of length of residence in Wiseman. |
| Improve communication and information exchange between local residents and NPS personnel. | Desire direct contact with park managers. |

## C. The Bureau of Land Management

The BLM is responsible for managing both the land and the resources in the Wiseman area except for the privately owned land in Wiseman, the State owned land of the Coldfoot development node, and Gates of the Arctic National Park and Preserve. The prohibition on firearm use within the pipeline corridor is a State Statute: "Hunting with firearms is prohibited north of the Yukon River in the area within five miles on either side of the highway between the Yukon River and the Arctic Ocean." (A. S.16.05.789(a)). The 1992 firearm hunt is a federal regulation. A 1983 report to the state Board of Game (the regulatory body that decides on regulations affecting game harvest in the state) gives some background to the statute, and to the pipeline corridor bow hunt:

> Regulations affecting use of the game resources along the Trans-Alaska Pipeline north of the Yukon River were implemented in 1974 when Fish and Game Commissioner James Brooks issued an Emergency Regulation closing the area within a strip 5 miles on both sides of the pipeline alignment from the Yukon River to Prudhoe Bay to the taking of big game. The intent of this action was to prevent overexploitation of the big game resources during construction of the pipeline.
>
> The Board of Game adopted this Emergency Regulation as part of the Codified Regulations in 1978 to effect annual regulatory changes for this closed area. In response to interest expressed for providing increased opportunity for bowhunting in the State, the Board provided for the taking of big game by bow and arrow within the corridor in 1980.
>
> (ADF&G 1983, 1).

The prohibition on off-road vehicles is also an Alaskan State Statute:

> Off-road vehicles are prohibited on land within five miles of the right-of-way of the highway. However, this prohibition does not apply to off-road vehicles necessary for oil and gas exploration, development, production, or transportation or to a person who holds a mining claim in the vicinity of the

> highway and who must use land within five miles of the right-of-way of the highway to gain access to the mining claim.
>
> (Sec. 19.40.210, James Dalton Highway).

This statute regarding the James Dalton Highway also states in the "Declaration of policy":

> It is the sense of the legislature that the construction of the highway will not impair the natural wilderness adjacent to the highway and will not unreasonably interfere with subsistence hunting, fishing, trapping, and gathering.
>
> (Sec. 19.40.010(5)(b)).

When the BLM took over responsibility for "subsistence management" of fish and game on BLM land, these State Statutes were honored in Federal regulations. This resulted from the fact that federal "subsistence management" regulations were initially intended to change the prior state regulations as little as possible:

> In view of the uncertainty over the resumption of State management of subsistence, a major objective of the Federal program has been to minimize disruption to Alaskans and the State's continuing fish and game management yet still fulfill the requirements of Title VIII [of ANILCA]. These regulations use existing State of Alaska regulations relevant to subsistence management as much as possible.
>
> (Federal Register 6/29/90, 27115).

Management policies and concerns for BLM land in the area fall under the proposed resource management plan for the Utility Corridor. The Utility Corridor is federal land that was withdrawn from mineral leasing and location, settlement, state selection and Native selection in 1971 to "protect the route of the Trans-Alaska Pipeline" ( BLM 1989, 1-1). The five mile corridor on each side of the Haul Road is within this Utility Corridor. Maps contained in the proposed resource management plan identify the Utility Corridor lands within the Wiseman study area as being open to mineral entry and location as well as oil and gas leasing once the plan is implemented (BLM 1989, maps). Three areas of critical environmental concern are

located in this corridor section: Poss Mountain, Sukakpak Mountain, and Snowden Mountain (ibid.). The "scenic quality" of the Wiseman area is listed as Class A: "Distinctive landscapes of outstanding visual quality" (ibid.). The "Unavoidable Adverse Effects of the Proposed Action" described for "subsistence" in the resource management plan are as follows:

> Increased recreational use of the Corridor and leasable mineral development will provide unavoidable increases in the need for public and commercial services, resulting in more employment in the development nodes. Localized unavoidable impacts to subsistence resources would result from any activity which increases local populations utilizing those resources. No significant restriction would occur as a result of opening lands to state selection or as a result of any development proposed in this plan.
>
> (BLM 1989, 4-21).

Section 810 of the Alaska National Interest Lands Conservation Act states in part that:

> . . . In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands under any provision of law authorizing such actions, the head of the Federal agency having primary jurisdiction over such lands or his designee shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.
>
> (Sect. 810(a) PL 96-487, 1980).

The environmental impact statement completed in conjunction with the Utility Corridor proposed resource management plan includes the evaluation required in Section 810 of ANILCA noted above. The evaluation comments that: "There are potential limitations to subsistence users and resources under some of the development scenarios; however, mitigation addressing those limits will be implemented in project specific EISs [environmental impact statements]," but

concludes " . . . the proposed plan will not cause a significant restriction to subsistence uses, resources, and needs in the Utility Corridor" (BLM 1989, M-2).

In October of 1991 a recreation management plan for the Dalton Highway recreation management area was approved by the BLM's Arctic District (BLM 1991b, title page). This plan concerns public lands within the Utility Corridor "closest to existing roads, including the Dalton Highway . . . and the Wiseman-Nolan-Hammond roads" (BLM 1991a, 3). The need for the recreation area management plan is stated as follows:

> While recreational activity along the Dalton Highway is still relatively light, it is significant and it is increasing. Although there is little data on visitor use, BLM recreation planners in the corridor area estimate that approximately 11,000 visitors arrive by privately owned vehicles and approximately 5,400 visitors travel through as part of commercial tour groups between June and September each year. These figures are expected to triple in the next 10 years if the road north of Disaster Creek (mile 211 Dalton Highway) is opened to public travel.
>
> Existing tourist facilities are few and far between along the Dalton Highway. To accommodate current and future recreational demands, ensure visitor safety, manage the resources and protect the integrity of the energy transportation corridor, BLM needs to identify not only appropriate management objectives, policies, and actions, but future staffing and funding requirements.
>
> (BLM 1991a, 3).

Facility developments described in the recreation area management plan that fall within the general Wiseman area include: access to the Middle Fork of the Koyukuk River and an interagency information center at Coldfoot; a public campground, a recreational vehicle overflow area, a trailhead, and an administrative complex (including cabins for NPS personnel) at Marion Creek; a recreational vehicle dump station and restroom facility either at Marion Creek or Coldfoot; the Bob Marshall Overlook along the Wiseman-Nolan road; a corral and trailhead at Gold Creek; Sukakpak Mountain wayside and interpretation site; and Bettles River access (BLM

1991b, E-30-41). At least fourteen other listed development sites (BLM 1991b, E-26-54) are within the portion of the Utility Corridor that Wiseman residents used when I accompanied them on resource harvest activities during the study period. The Supervisor of the Natural Resource Specialists for the Arctic District said that the BLM would like to implement the recreation area management plan "as expediently as possible," within the six-year implementation schedule.

The BLM states that the Dalton Highway recreation area management plan conforms with the Utility Corridor resource management plan environmental impact statement (BLM 1991b, Appendix F). "Subsistence uses and needs" are addressed in the recreation area management plan under management constraints:

> The following resource decisions, derived from policy, planning, regulations and law have placed constraints on the management of the DHRMA [Dalton Highway Resource Management Area]:
> Subsistence uses and needs will be considered and adverse impacts will be minimized to the extent practical in accordance with the Utility Corridor RMP [Resource Management Plan], and Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA).
>
> (BLM 1991b, 14).

The person responsible in BLM's Arctic District for determining whether impacts to "subsistence uses" should be either analyzed or cleared under Section 810 of ANILCA told me that he "could not see any action [referring to recreation development sites in the Dalton Highway recreation area management plan] on the Haul Road significantly impacting subsistence resources." However, the BLM Wildlife and Subsistence Biologist for the Arctic District has concerns that increasing use of the Haul Road by "urban users" may cause a decrease in the local moose population through increased hunting. This biologist also commented that the BLM knows relatively little about the biological resources in the area. In this respect, feedback from locals on their harvest would be helpful.

The following table summarizes BLM concerns expressed here, and the concerns of local residents discussed earlier.

**Table 32**

**Summary of BLM and Local Resident Concerns**

| BLM Concerns | Local Resident Concerns |
|---|---|
| Initially upheld state statute restrictions prohibiting firearm use in the corridor. Changed regulations for rural residents in 1992 and 1993. | Obtain and maintain a local priority firearm hunt and motorized access in the corridor. |
| Implement utility corridor resource management plan to provide multiple use of area lands. Implementation not anticipated to cause significant restrictions to subsistence activities. | Implementation of BLM plans will negatively impact renewable resources and renewable resource use. Frustrated with not being able to comment on the BLM recreation area management plan. |
| Implement the recreation area management plan. | Recreation area management plan developments will negatively impact renewable resources and resource use in the area. |
| Protect moose populations from negative impacts of increased sport hunting. | Development of BLM land will increase the number of people, especially sport hunters, in the area. |
| Gain more information on renewable resources in the area. | Perform species population studies in the area |
| | Desire direct contact with BLM managers. |
| | Avoid the wounding and wasting of animals attributed to the corridor bow hunt. |
| | Maintain the ability to harvest wood on all BLM lands. |

## D. Concerns of the Alaska Department of Fish and Game

Alaska's Department of Fish and Game is currently responsible for managing the "non-subsistence" harvest of fish and game on all lands in the state where such harvest is allowed, and for managing "subsistence" harvest on non-federal lands.

Management functions in the ADF&G are spread among different divisions. Interviews were conducted with individuals in the Subsistence Division, a unit which, according to the Division's Statewide Coordinator, provides technical support and assistance to other ADF&G departments. Conversations were also held with staff of the Division of Wildlife Conservation, including the Galena Area Biologist, who deals with ADF&G concerns in the Wiseman area.

ADF&G was responsible for managing fish and game on all lands in the Wiseman area prior to July 1, 1990. On this date, the Federal Government took over the management of "subsistence" on Federal public lands in the State of Alaska (Federal Register 6/29/90, 27114). In the Wiseman area, all lands except the Coldfoot development node and the private lands in Wiseman itself are federal public lands. Table 33 compares 1992/93 federal "subsistence" harvest seasons for Wiseman residents hunting on federal lands with the 1992/92 state "non-subsistence" harvest seasons (bow only within corridor) which apply to Wiseman residents. The locations of GMU's 24, 25A, 25D, 26A, and 26B are illustrated in Map 5.

As is evident from this table, local residents must work with several layers of harvest regulations. The new (1992) federal firearm subsistence harvest of moose in GMU 24 is important to local residents, as they are not eligible to subsistence hunt for moose in the other GMU's, and state regulations require the use of bow and arrow

## Table 33

### Comparison of 1992/93 State Non-subsistence Harvest Seasons and Federal Non-subsistence Seasons for Wiseman Residents in the Wiseman Area.

| Species | Harvest Season Unit 24 | Harvest Season Unit 25 | Harvest Season Unit 26 |
|---|---|---|---|
| Moose Federal Season | Aug. 25-Sept. 25.<br>Mar. 1-10, Dec. 1-10,<br>Aug. 1-Dec. 31 in specific areas. | not eligible | not eligible |
| Moose State Season | Varies according to specific location:<br>Aug. 25-Sept. 25 closest to Wiseman. | 25A: Sept. 5-Sept. 25.<br>25D: varies according to location | Aug. 1-Dec. 31.<br>Sept. 5-Sept. 15 within the corridor with bow and arrow. |
| Dall Sheep Federal Season | Aug. 1-April 30 Gates National Park.<br>Aug. 10-Sept. 20 rest of unit. | 25A not eligible.<br><br>25D not listed. | Aug. 1-April 30 Gates National Park.<br>Aug. 10-Sept. 20 rest of unit. |
| Dall Sheep State Season | Aug. 1-April 30 Gates National Park.<br>Aug. 10-Sept. 20 rest of unit. | Aug. 10-Sept. 20.<br>Oct. 1-April 30, restrictions apply. | Aug. 1-April 30 Gates National Park.<br>Aug. 10-Sept. 20 rest of unit. |
| Caribou Federal Season | July 1-June 30 in Wiseman area.<br>Aug. 10-Sept. 30 in specific drainages. | July 1-April 30.<br>Aug. 10-Sept. 30 in parts of 25D. | July 1- June 30. |
| Caribou State Season | July 1-June 30 in Wiseman area.<br>Aug. 10-Sept. 30 in specific drainages. | July 1-April 30.<br>Aug. 10-Sept. 30 in parts of 25D. | July 1-April 30, some restrictions apply. |
| Black Bear Federal Season | July 1-June 30. | July 1-June 30. | July 1-June 30. |
| Black Bear State Season | no closed season | no closed season | no closed season |
| Grizzly Bear Federal Season | Sept. 1-May 31, restrictions apply in some areas. | not listed | not eligible |
| Grizzly Bear State Season | Sept. 1-May 31, one bear every four regulatory years. | Sept. 1-May 20, one bear every four regulatory years. | Sept. 1-May 31, one bear every four regulatory years. |

within the corridor. The fall hunt is critical for moose harvest, moose being the major meat supply. The success of hunting moose in the corridor determines in large part the degree to which moose hunting will occur on park lands. With the relatively successful 1992 moose harvest in the corridor (plus the addition of road and winter killed moose meat during the winter of 1992/93), residents did not access park lands in both the fall and spring seasons of 1992/93 to the extent they had in the fall and spring of 1991/92.

Concern was expressed by the ADF&G Subsistence Coordinator over the fact that the federal and state governments now have two competing and contrasting systems for "subsistence management." "We're not working together" was the statement made regarding state and federal "subsistence management." It was pointed out, however, that different state and federal agencies have different philosophies of management.

The mission of the Division of Wildlife Conservation of the ADF&G " . . . is to conserve and enhance Alaska's wildlife and to provide for a wide range of uses for the greatest benefit of current and future generations of the people" (ADF&G 1992a, 3). The BLM is mandated by the Federal Land Policy and Management Act of 1976 to manage its land according to the principles of multiple use and sustained yield (Sect. 302 PL 94-579, 1976). The 1916 Organic Act of the NPS establishes the policy framework for the NPS:

> The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations . . . by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.
>
> (39 Stat. 535).

On August 19, 1992 the Coldfoot development node was transferred to state ownership (State of Alaska News Release, 8/28/92). The State will continue the prohibition of using both firearms and off-road vehicles for hunting on this state land:

> . . . state regulations prohibit hunting with firearms within five miles on either side of the Dalton Highway north of the Yukon River. Instead, subsistence hunters on state land in the corridor are allowed to use only bow and arrow (State of Alaska News Release, 8/28/92).

The Alaska State hunting regulations for the Dalton Highway Corridor management Area reads:

> (A) the area consists of those portions of Units 20, 24, 25, and 26 extending five miles from each side of the Dalton Highway form the Yukon River to the Prudhoe Bay Closed Area;
> (B) the area is closed to hunting; however, big game, small game, and fur animals may be taken in the area by bow and arrow only; no motorized vehicle, except aircraft, boats and licensed highway vehicles, may be used to transport game or hunters within the Dalton Highway Corridor Management Area; any hunter traveling on the Dalton Highway must stop at any check station operated by the department within the Dalton Highway Corridor management Area.
>
> (ADF&G 1992a, 23).

These prohibitions are now in effect in the Coldfoot development node. Local residents must use state regulations in this area.

ADF&G biologists concerned with game species in the region that includes the Wiseman area say that the area has never been a priority, and "precious little" population survey information is known for species in the area. According to two of these biologists, the old game population data for the area is "not very good," particularly since ADF&G did not have the funds for accurate surveys. According to one biologist, the state's season and bag limits for moose in GMU 24 is based on prevailing conditions in the Unit prior to the Haul Road being built.

These biologists stated a concern that the ADF&G needs to get harvest reports from local residents, but said that "from an Alaska Department of Fish and Game point of view, this area is inconsequential . . . a 'non-problem' area." A member of ADF&G's Wildlife Conservation Division said that "Wiseman is not a management concern, as it has a low human impact." There are other areas in the state that have a higher priority for research and management funding.

## E. Summary of Management Agency Policies and Concerns

Overall policies and concerns of the three agencies regarding renewable resource use in the area are summarized as follows:

### National Park Service

- Provide for subsistence uses of park resources, balance these uses against western wilderness values, and leave the park "unimpaired for the enjoyment of future generations."
- Maintain natural and healthy species populations, although it is unknown at this time what constitutes a "natural and healthy" population.
- Regulate eligibility, access, and allocation now to avoid potential future negative impacts on park resources.
- There is a potential for significant growth in Wiseman's permanent resident population.
- Determine who in Wiseman used park resources before 1980.
- Improve communication and information exchange between local residents and NPS personnel.

**Bureau of Land Management**

- Manage land and resources on a multiple use and sustained yield basis, in accordance with the proposed Utility Corridor resource management plan.
- Implement the recreation area management plan for the corridor.
- Continue to provide firearm hunt (allowed 1992) and snow machine access (allowed 1993) for resource harvest for local residents within the corridor.
- Protect moose populations from negative impacts of increased sport hunting in the corridor.
- Gain more information on renewable resources in the area.

**Alaska Department of Fish and Game**

- Conserve and enhance wildlife for a wide range of uses.
- Regulate all harvest in Coldfoot development node, and regulate non-subsistence harvest on all land outside Gates of the Arctic National Park. Regulate sport fishing within Gates of the Arctic National Park, and regulate both sport fishing and sport hunting within Gates of the Arctic National Preserve. Uphold State Statutes prohibiting firearm use and off-road vehicle use for harvesting resources for all users on state lands.
- Little information exists on fish and wildlife populations in the Wiseman area. This area is a low priority for research and management funding.

# XI. WISEMAN IN THE CONTEXT OF OTHER RURAL ALASKAN COMMUNITIES

## A. Introduction

Several factors point to the importance of studying "subsistence" in Wiseman: Wiseman's population is currently 81% non-Native. Few studies exist which document "non-Native subsistence." In this study, I examine Wiseman livelihoods in relation to a "subsistence-based socioeconomic system," an important element of which is a "mixed subsistence/cash economy" (Wolfe et al. 1984). This latter concept is used to describe the economies of many rural Alaskan communities. I also examine the sources of cash income in Wiseman, as income source is considered to be an important factor in determining the level of participation in resource harvest activities in a mixed subsistence/cash community economy. Access and eligibility to harvest resources are issues central to livelihoods in rural Alaskan communities. I examine these issues in light of the fact that Wiseman is located in a transportation/development corridor, and Gates of the Arctic National Park and Preserve lies adjacent to the community. Three separate entities manage these lands, so various land and resource management policies impact the livelihoods of Wiseman residents. An examination of the impacts of road development and park resource management policies provides insight into how these impacts and policies could affect other rural Alaskan communities. Finally, I comment upon my experiences developing a cooperative study process which involved participation of local residents to a relatively high degree. There are indications that community

involvement in conducting community research may be useful in both future studies, and as a guide for effective communication between local residents and agency managers.

## B. Non-Native Use of Local Renewable Resources

In his study of the north addition to Mt. McKinley area, Bishop notes that a "subsistence lifestyle" does not necessarily follow cultural lines:

> To many people, the term 'subsistence lifestyle' often suggests living off the land, to a variable extent, within the cultural context of one of Alaska's Native cultures. Certainly, in many of Alaska's rural areas, this conception of subsistence lifestyle is accurate. However, the term 'subsistence lifestyle' is more inclusive than that, for in many cases people of other cultural origins have chosen to live as hunters, trappers, and fishermen, more or less after the fashion of Alaska Natives.
>
> The interchange of material goods and of the desire for them has contributed to such convergence of material culture among rural natives and non-Natives that the type of activity pursued, the equipment used, and use of resources obtained are very similar, if not indistinguishable. Thus, it is not difficult to find an Alaskan Native and an Alaskan non-Native living in a rural area doing basically the same kind of work, with the same kind of equipment, in order to make a similar living. It seems to me that there is a good deal of convergence, too, in the perspectives of Native and non-Native subsistence users.
>
> (Bishop 1978, 50).

Caulfield also notes the fact that both Native and non-Native local residents utilize the land and local resources in his study of the Yukon-Charley Rivers area:

> Non-Natives have moved into traditional subsistence areas and are now actively leading a subsistence lifestyle significantly dependent on the land. At the same time, many of these recent users are attempting to retain fragments of the traditional knowledge and skills which have evolved over thousands of years. . . .

> . . . In Yukon-Charley, traditional knowledge and skills are being in part perpetuated by non-Natives. This includes knowledge of specific subsistence areas, techniques, and histories which are a key component of the human ecology of the area.
>
> (Caulfield 1979, 87).

The adjoining settlements of Bettles and Evansville, south of Wiseman on the Koyukuk River, also have a history of a mixed Native/non-Native population. In their study of contemporary resource use patterns in the Upper Koyukuk region, Marcotte and Haynes note that "[s]ubsistence uses are important for Bettles/Evansville. The village shows how immigrants can establish a mixed subsistence-based economy in a rural region" (Marcotte and Haynes 1985, 96).

In a study conducted in 1974-1975 with the Kuuvanmiit Eskimos of the Kobuk River Valley in northwestern Alaska, the authors of the research describe the non-Native population in the upper Kobuk River Valley:

> These people relied heavily upon subsistence resources, and began assimilating the life style of the nearby Eskimos, with whom they maintained frequent and amiable contact. . . . Drawing on their deep respect and admiration for the Eskimos, the settlers quickly absorbed subsistence skills, knowledge of the land, food preferences, social patterns, and a general Native living style. . . . All of the [non-Native] settlers obtain most of their staple foods by subsistence hunting, fishing, and gathering. Their degree of involvement with a cash economy varies considerably, . . . [a]bout half of the non-Natives follow an economic pattern nearly identical to that of the typical Native householders. Subsistence is their basic livelihood, and intermittent employment provides enough cash to purchase supplemental food and other basic necessities.
>
> (Anderson et al. 1977, 582-585).

Following the Kuuvanmiit research, a further study was conducted in the central Brooks Range between 1975 and 1976 among Nunamiut Eskimos and the Koyukuk River Indians (Nelson, Mautner, and Bane, 1982, 8-9). This study included some information from the Kuuvanmiit work (ibid.), as these three groups of people all live on lands "within and around the proposed Gates of the Arctic National Park" (Nelson, Mautner, and Bane, 1982, 7,9). In this second study, published as *Tracks in the*

*Wildland*, Bane noted that "Native and non-Native subsistence-oriented persons living within the Gates of the Arctic region rely heavily upon hunting to obtain a substantial portion of the protein they consume" (Nelson, Mautner, and Bane 1982, 26). As was noted earlier, Wiseman residents' dependency on the harvest of local renewable resources ranges between 60% and 80% for their general food supply, and up to 95% of their meat. These community figures indicate a significant dependency on local harvest activity for food supplies, which is consistent with non-Native "subsistence lifestyles" described by Bishop and Caulfield for other rural areas of the state, and with comments regarding non-Native inhabitants of the central Brooks Range region in the Kuuvanmiit and *Tracks in the Wildland* studies.

As was explained in Chapter IV, Koyukon Indians, Nunamiut Eskimos and Kobuk Eskimos (the Kuuvanmiit) were drawn to the Wiseman area by social and economic opportunities. As both Native and non-Native people have lived in Wiseman since the early 1900s, it seems logical to think that knowledge and skills relating to land and local resource use, and the resources themselves were shared among community members of both races. Arctic John Etalook provided meat for miners. One non-Native Wiseman trapper now traps the line of Tishu Ulen, a former Wiseman Eskimo resident. When I accompanied the trapper on this line, he showed me where Mrs. Ulen told him to set a trap.

## C. The Subsistence-Based Socioeconomic System

As few studies of non-Native rural Alaskan communities exist, it is instructive to analyze renewable resource use in light of factors that characterize Alaskan rural economies in general. A study conducted in coastal communities of southwest Alaska, along with the previously mentioned studies, provide useful comparisons for Wiseman. This 1983-1984 study describes in detail the characteristics of a "subsistence-based socioeconomic system" of rural communities:

> (1) A community-wide seasonal round of fishing and hunting activities. The economic activities of a community follow a yearly cycle regulated by the seasonal appearance and availability of fish and game resources.
> (2) High production outputs of fish and game, reflecting high dependencies of the community on wild resources.
> (3) Fishing and hunting occur within kinship-based units, termed a domestic mode of production. Capital and labor are controlled within these domestic units.
> (4) Extensive, non-commercial distribution and exchange networks. Fish and game are shared, distributed, and exchanged in non-commercial transactions frequently and in large quantities.
> (5) Traditional systems of land use and occupancy.
> (6) A subsistence-based system is a mixed economy: food and production for subsistence use is mixed with monetary employment in the community and region. The economy is composed of a 'subsistence sector' and a 'cash,' or 'market sector.'
>
> (see Wolfe et al. 1984, 50-51).

In general, the community of Wiseman appears to exhibit each of these characteristics to a varying degree. The economic elements are more evident than the social elements described above.

The first element, the seasonal round, is described in the southwest communities study as:

> The production of fish and game follows a regular yearly cycle based on the seasonal appearance of fish and game resources. Economic activities shift and change with the seasonal cycles . . .
>
> The accessibility of fish and game to capture is influenced by weather and traveling conditions. Hunting success may be substantially reduced because poor weather curtails the amount of hunting attempts or hunting effectiveness . . . Thus, the vagaries of weather can significantly alter the seasonal round of activities from year to year.
>
> (Wolfe et al. 1984, 312, 314).

The seasonal round in Wiseman, discussed in Chapter V, is influenced by weather and travel conditions.

Wiseman's dependency upon renewable resources for food, the second element that characterizes a subsistence-based socioeconomic system, was discussed in the previous section. Wiseman, unlike many rural Alaskan communities, is not located on a river that contains large fish stocks which can augment or form the basis of household food supply (although one household does supplement its diet with fish brought back from Bristol Bay fishing efforts). In his study of the Minchumina area (in the Mt. McKinley north proposal study), Bishop noted that "[a] reliable supply of fish has been one of the most important elements in virtually every subsistence economy in Interior Alaska" (1978, 37). One Wiseman resident pointed out that there are other exceptions (such as Arctic Village) to this generalization. An additional consequence of the lack of a reliable supply of fish is that Wiseman dog-team owners must purchase commercial dog food outside the area.

The third characterization of a subsistence-based socioeconomic system, domestic mode of production, does not seem to be a major attribute of the Wiseman community, although three households in Wiseman are related. It is by no means uncommon for members of different households to go on hunting trips together. However, these joint trips do not necessarily occur between members of the related households. A Wiseman resident noted that when the old-timers were still around,

more sharing of household production occurred in Wiseman. All current households are now of the age class capable of procuring renewable resources for themselves.

Non-commercial distribution and exchange networks, the fourth characteristic of the socioeconomic system, do exist in Wiseman. Meat gets shared around the community, and bartering occurs. One Wiseman resident told me that he thought it would be difficult for an individual to starve in Wiseman. He had not harvested an adequate supply of meat for the winter of 1991/92, but he said he had been able to survive because people gave him enough meat to get through.

A mixed subsistence/cash economy is the sixth characteristic of a subsistence-based socioeconomic system. Lonner (1986) wrote of theoretical observations and management implications of "subsistence" as an economic system. He explains that both cash and "subsistence foods" are recognized as a necessary part of a mixed economy:

> A cash-free society, even at the local level at this time, is neither possible nor desirable . . . There is a large amount of western hard goods and foodstuffs in villages. This is indicative of an interaction between economic systems, not the replacement of the subsistence system . . . [I]t is clear that the continued high use of subsistence foods cannot be offset by wages and transfer payments. It is also likely that cash to local stores provides primarily carbohydrates to the diet; vital protein and fats tend to be provided primarily through local production.
>
> (Lonner 1986, 17).

Bishop's study explains that a mix of local resource harvest and cash income constitute the local economy of Telida, in the Mt. McKinley proposal study:

> At Telida, use of subsistence resources is combined with seasonal employment of various kinds to provide a living. It appears that these two sources of support often compete for the time and energy of the user. Nevertheless, both cash income and subsistence resources are needed to live, and the cash returns from trapping are notoriously variable.
>
> (Bishop 1978, 98).

A mixed subsistence/cash economy has also been documented in other central Brooks Range communities:

> Village people seem committed to the idea of a mixed economy. They would not give up subsistence because it fulfills basic physical and psychological needs; and they would not give up wage earning because it satisfies other needs more recently acquired but still very important. What they seek is not exclusively one or the other, but both.
>
> (Nelson, Mautner, and Bane 1982, 281).

Marcotte and Haynes describe a mixed subsistence/cash economy in their study of Upper Koyukon communities:

> As in other rural Alaskan communities, residents of Bettles/Evansville, Allakaket, Alatna, and Hughes are involved in both cash-producing and subsistence sectors of the local economies. Nearly all households surveyed participated in both activities.
>
> (Marcotte and Haynes 1985, 89).

There is no question that there is a "cash sector" to Wiseman's economy. Goods and materials are purchased from Fairbanks, for example, and equipment and fuel is paid for with cash. As is described in Chapter V, however, resource harvest activities are an integral part of contemporary Wiseman livelihoods.

The integration of cash income and use of renewable resources grew from the insecurity inherent in both economic sectors. Lonner explains the importance of combining economic sectors for security rather than profit reasons:

> Material insecurity in the sense of an uncertain food supply, together with the absence of reliable and sufficient alternative sources of livelihood, characterized most traditional economies. This insecurity created an extreme dependence on one's kin and local community and produced an environment in which the economy and the society were inextricably 'embedded' in one another (Dalton 1971).
>
> Today, this same uncertainty is expressed over the future of both wild resource and wage employment. Security is found in a combination of cash and subsistence resources, although neither resource alone is generally

> considered a safe source of livelihood. What appears to be maximized in subsistence economies, then, is *not profit or wealth but security*. (Emphasis in the original).
>
> (Lonner 1986, 19).

Wiseman residents noted that a major constraint of their lifestyle is the lack of local employment. Residents felt that it was necessary for them to be able to harvest local resources, to offset the insecure local cash economy.

Bishop notes that the concept of a mixed subsistence/cash economy in rural Alaskan communities is closely related to a preferred lifestyle, in addition to representing the way to balance nutritional needs with the lack of available cash income:

> [T]he Minchumina community is presently a good example of the sort of 'mixture' of subsistence and non-subsistence life support common in rural Alaska today.
>
> Over a period of nearly 60 years, the Minchumina area has supported a relatively low population of subsistence users. The degree of use has varied greatly, perhaps more in response to economic conditions than any other single factor. However, for a few people who were willing to accommodate the ups and downs of resource availability or value, or who found additional means of support, the Minchumina area has provided homes and a place to pursue a subsistence, or at least a rural lifestyle.
>
> (Bishop 1978, 12).

Wiseman area residents explained that they chose to live in the area, and they feel the lifestyle has its own intrinsic value. To gain the economic security they need, a balance of cash and renewable resource harvest is necessary.

The study of southwest coastal communities found that an increase in cash income may lead to increased participation in resource harvesting activities:

> One finding of this study is that increased levels of cash have not led to a demise of the traditional systems of subsistence production, distribution, and exchange in the study communities. Nowhere do the data from this study suggest that increasing cash wealth in itself is associated with diminished subsistence distribution and exchange. In fact, there is some indication that the

> opposite seems to hold - that is, that higher levels of cash income are often associated with higher levels of subsistence production and exchange.
>
> (Wolfe et al. 1984, 496-497).

Lonner also notes that:

> [I]ncreasing wage or other income does not result in decreased resource dependence or utilization. Increased income appears to lead to more efficient, reliable, useful, and less-demanding subsistence technology. Improved technology provides wider-ranging transportation to offset both resource scarcity in the immediate area and the reduction in available time to engage in subsistence activities . . . It is possible that *both* increases and decreases in local employment may lead to increased subsistence effort in both urban and rural areas. This increase in effort may or may not, of course, result in greater productivity. (Emphasis in the original).
>
> (Lonner 1986, 18-19).

Although I do not specifically know household incomes for Wiseman, it was evident to me that a direct correlation exists between the relative levels of income that I inferred, and the degree of participation in resource harvesting activities that I observed. The cash in a mixed subsistence/cash economy frequently supports the harvest of local resources, as cash is needed to purchase the equipment necessary for resource harvest (Wolfe et al. 1984, 438). Those Wiseman households with the greatest investment in equipment utilized in resource harvesting activities tend to be the most active households in harvesting activities.

Given this apparent relationship between level of cash income and degree of participation in resource harvest activities, a conclusion might be that the higher the cash incomes, the greater the quantities of harvested resources. However, according to the southwest coastal communities study, this is not an accurate conclusion:

> [T]here is little evidence that increasing efficiencies in production are associated with large expansions in subsistence production. Levels of demand for subsistence products seem to be set by factors other than the technical tools used in procurement, such as the limited size of local consumption networks, production for 'use value' rather than 'exchange value,' usufruct rights restricting access to resource areas, traditional resource conservation ethics,

> storage and processing constraints, and the relative cost-return ratios of alternative species (Usher 1981, 1983; Wolfe and Behnke 1982; Berkes 1981). . . . The fears of resource managers that new technology leads to biologically dangerous overproduction by-and-large are unsupported.
>
> (Wolfe et al. 1984, 49).

Wiseman community harvest levels for large game (moose, caribou, Dall sheep, black bear, and grizzly bear) are based on the number of animals needed to feed the household over the course of a year. Meat is neither sold (an illegal activity) nor bartered. A major concern regarding the possibility of being limited to resource use areas is that such limitation will result in excessive harvests, or "subsistence overproduction" in those areas, whether this be of game species or furbearers.

According to Wolfe et al. (1984, 441), wage employment can be compatible with renewable resource harvesting activities. Characteristics related to income source must therefore be evaluated.

Some of the frequent sources of income in a subsistence-based socioeconomic system are outlined in the southwest coastal communities study:

> Money may be gained through several channels - the commercial sale of fish and furs, wage employment, cottage industries, and state and federal transfers are possible income sources. Typically, but not exclusively, monetary incomes at the community level are relatively low and unreliable from year to year, and communities cannot function solely on these monetary earnings. Money is invested in the equipment for fishing and hunting for subsistence uses, the most reliable sector.
>
> (Wolfe et al. 1984, 51).

The amount of cash income is less a determining factor in participation in the "subsistence sector" of the community economy than is the source of that income. The southwest coastal communities study later notes:

> To what extent the types or sources of monetary income are compatible with the traditional schedule of fishing and hunting is a guiding question. The assertion is that certain types of monetary activities can be strategically integrated into subsistence hunting and fishing so as to enhance participation in subsistence-

> related activities. In these circumstances, income is invested into technology used for hunting and fishing. Consumption will be largely based on subsistence resources and purchased foods will be of secondary importance. On the other hand, sources of monetary income which are incompatible with the subsistence schedule will decrease the level of subsistence participation at the individual, community, or regional levels.
>
> (Wolfe, Ellanna, and Usher in Wolfe et al. 1984, 439).

Within the central Brooks Range region, Nelson noted a preference for seasonal employment among community households, and commented that such employment is often only available away from the area:

> It is very difficult to earn wages in a village. Jobs are limited to a few positions such as school maintenance man, teacher's aid[e], postmaster, and storekeeper. People who are committed to subsistence usually shy away from these jobs because hunting, trapping, fishing, and gathering require a full-time effort for maximum success. Seasonal employment is therefore preferred by many people; but this is often undependable and it takes men away from their homes and families.
>
> (Nelson, Mautner, and Bane 1982, 280).

For Wiseman, none of the current full time households have year-round wage income. One household missed the fall 1991 moose harvest season due to wage employment outside the area. This was an experience they said they would avoid repeating, as they felt financially burdened by having to purchase a large proportion of their meat for the year. Bishop noted a similar concern regarding the timing of non-local wage employment:

> Employment away from home affects other subsistence activities, ranging from hunting to wood cutting. One Telida man spent most of the fall working as a big game guide and missed the best part of moose hunting and fall fishing. Although many people successfully meld conventional employment and subsistence pursuits, it has been my experience that it requires some practice to do so.
>
> (Bishop 1978, 74).

Lonner notes that "[m]any persons choose wage unemployment during subsistence seasons, unless the household or community requires additional cash investment . . . "

(1986, 18). Although I never asked the direct question, I perceive that despite the fact that the shortage of cash income is cited as a major constraint to living in the area, not all Wiseman households would take a full-time year-round job if it were locally available. Several households told me that they highly valued their time spent engaged in resource harvest and use activities, and were wary of wage employment that would interfere with such activity. It could also be possible that Wiseman household members simply do not like to work in wage employment activities. Casual conversations and comments lead me to believe that individuals in Wiseman prefer to "be their own bosses."

One researcher notes that "subsistence" is in fact a form of employment:

> It is a popular belief that rural areas suffer from an unacceptably high level of unemployment. Unemployment *in the wage economy* may be perceived as being too high, particularly by local job seekers. Subsistence is, however, a form of significant employment for tens of thousands of Alaskans. Thus, there is a great deal of 'disguised employment,' a systematic underestimation of the amount of labor performed. (Emphasis in the original).
>
> (Swetnam 1980, in Lonner 1986, 18).

A question that this quote brings to mind is: "If a person receives unemployment compensation, can they also be legitimately 'employed' in 'subsistence'?" Transfer payments (which include unemployment compensation) are noted in the southwest coastal communities study as a source of income, but the extent to which these payments add to Wiseman household incomes was not determined. One Wiseman resident did note in one of my formal surveys that:

> 'Subsistence' does not generally produce income. The cost of labor when engaged in subsistence activities should be figured into any income generalizations.

All of the sources of cash income discussed for Wiseman are seasonal in nature. Wiseman does not have a school, post office, health service, or any form of

established public services which are often cited as year-round local employment opportunities in rural communities. The conclusion of the Upper Koyukuk study notes that "[b]y and large, job opportunities throughout the area were seasonal or part-time in nature" (Marcotte and Haynes 1985, 89). Communities downstream from Wiseman on the Koyukuk River in this region have options for local employment different from opportunities in Wiseman. Bettles residents are employed by the Federal Aviation Administration, the BLM, the NPS, the U.S. Postal Service, the school, and the power plant, for example (Marcotte and Haynes 1985, 22). Residents of Allakaket, Alatna, and Hughes have year-round positions as postal clerk, air service agent, and power plant operator (ibid., 24, 26).

Table 27 outlines employment opportunities for Wiseman residents. In 1991/1993 the dominant form of cash income production was seasonal, non-local opportunities. Seven out of ten households left Wiseman to earn cash during the study period at the following occupations: commercial fishing (two households); trucking; construction; non-local tourist trade (two households); and employment information on one household was unknown.

The fifth characteristic of a "subsistence-based socioeconomic system" is traditional systems of land use and occupancy. As is further explained in the southwest coastal communities study, these traditional systems involve:

> The fishing and hunting areas used by communities are influenced by systems of non-codified customary laws defining rights of access. Traplines, fishcamps, set net sites, drainages, and other areas frequently are recognized as the customary use areas of particular kinship groups and communities. The systems of land use represent a sociopolitical organization of fishing and hunting, whereby access to resources is defined and controlled (cf. Usher 1983; Feit 1983).
>
> (Wolfe et al. 1984, 51).

The customary use of a trapline by an individual Wiseman trapper is respected as a property interest by other community members. Marcotte and Haynes reported similarly recognized land use rights regarding traplines in communities in the Upper Koyukuk region:

> Behind the apparent myriad of lines shown on the community trapping area maps lies an organized system of locally recognized land use rights. . . . Trapping areas are identified with specific individuals and the area is often referred to as 'their' trapline.
>
> (Marcotte and Haynes 1985, 78).

However, Wiseman residents do not appear to regard drainages and specific hunting areas in light of an accepted "ownership right." During the 1992 fall moose season, all community residents used the same area, the Haul Road corridor, as a focus for their caribou and moose hunting efforts. Favorite hunting areas, particularly for Dall sheep, tend to be guarded secrets, rather than representing any form of respected usufruct rights. Set net sites and fish camps, as noted in the southwest coastal communities study, currently do not appear to be utilized in the Wiseman area. Wood yards are also subject to usufruct rights in the Wiseman area.

Among Wiseman households, there appeared to be an equality across the community regarding opportunities to hunt and harvest vegetation. Land management agency policies that limit eligibility and access to the local resources currently treat Wiseman as a whole, in that all residents of the community are eligible to harvest resources in Gates of the Arctic National Park, and all Wiseman residents (as well as all local rural residents) are currently allowed to harvest resources using firearms in the Haul Road corridor. The issues surrounding resident zone/individual permit eligibility to harvest park resources were discussed in the preceding chapter. Should the National Park Service resident zone policy for Wiseman change to one

that allocates individual use permits to those people who resided in Wiseman before park establishment in 1980, this would no longer be true. There would no longer be equal access to park resources. This is an issue that has the potential to create upheaval within the community. Using the criteria of a particular date would divide the community into those who may harvest resources in the park, and those who may not do so. It is possible that other criteria (such as degree of dependence on renewable resources), or combination of criteria that would not have such a divisive effect on the community, can be used to determine harvest eligibility in the park.

Concerns over the continued eligibility to utilize the local land and renewable resource base pre-date ANILCA. In the 1978 study of the Mt. McKinley proposed addition area, Bishop noted the concerns of one household member:

> The father is quite concerned about retaining the right to use the traplines and other local resources, as he and his family have in the past, whatever may be decided with regard to land classification.
>
> (Bishop 1978, 16).

This is also reflected in the concerns of Wiseman residents regarding their continued ability to harvest park resources, and the ability of their children to continue these land and resource utilization practices.

Wiseman is apparently not the only rural Alaskan community whose ability to utilize local natural resources has changed due to changing land management policies in the state:

> Traditional land use and tenure systems, which provided open access to resources for all members of the hunting society, are under pressure of replacement by a complex land classification system infused with special conditions of use and controlled from urban centers. Along with the introduced system of lands classification and property rights comes an application of a

> system of fish and game management. The system seeks to regulate the take of fish and wildlife by controlling access to hunting areas, types of technology utilized, seasons of hunting, and quantities taken.
>
> (Wolfe et al. 1984, 524-525).

Although federal agencies have recently allowed Wiseman area residents to utilize both firearms and snow machines in the Haul Road corridor, state statutes continue to prohibit these activities on state land in the corridor. At this point, the only state land in the Wiseman area is the Coldfoot development node, although in 1985 the Alaska Department of Natural Resources proposed the selection of approximately 1.1 million acres of land in the Utility Corridor, north of the Yukon River and south of the North Slope Borough boundary (DNR 1985, cover memo). This recommended land selection included the land surrounding Wiseman (DNR 1985, Option B map).

## D. Impacts of Potential Road Development

The southwest Alaska coastal communities study noted that improved roads and airstrips " . . . attract visitors and new residents to an area." (Wolfe et al. 1984, 559). Unlike many rural Alaskan communities, Wiseman can be accessed by a road that is maintained on a year-round basis (the Haul Road). Once firearms were permitted for use by local residents adjacent to the road, this road focused game harvesting efforts.

Caulfield noted in 1979 that residents of Eagle, although located on the Yukon River, utilized the local summer road for hunting: "Much hunting by Eagle residents is now focused on the Taylor Highway because of the ease of hunting by vehicle and transporting a moose shot near the road." (Caulfield 1979, 28). In contrast, rural communities that do not have summer road access and are located on navigable rivers

use the river as a "highway" for scouting game: "Hunting during the study period by Bettles/Evansville residents occurred primarily along the river system using boats" (Marcotte and Haynes 1985, 56).

In 1961 the State of Alaska proposed building a road from Fairbanks to the Minto Lakes region, so non-locals could access the area more easily, and a recreation area could be established (Arnold 1976, 100). Minto Chief Richard Frank noted that

> . . . State development in the region would ruin the subsistence way of life of the Natives and urged that the recreation area be established elsewhere, where new hunting pressure would not threaten the traditional economy. He said, 'A village is at stake. Ask yourself this question, is a recreation area worth the future of a village?'
>
> (Arnold 1976, 101).

In a 1991 interview for the Fairbanks Native Association, Mr. Frank said that later the village of Minto had to be moved from its location where it was subject to continual bank erosion. New Minto is located on an existing road, as the villagers wanted road access to Fairbanks hospitals, an area with good drainage and no flooding, where they could have access to an airstrip, and where they could expose their young people to development (Frank 1991). However, during the first hunting season in the new location with road access, the local Minto residents were overrun with outside hunters (ibid.). So too the Haul Road provides opportunities and constraints for Wiseman area residents.

As noted in the previous examples, roads impact local resources by focusing harvest activities as well as bringing more people to the area. They provide a local source of income and development opportunities, as well as access to public services in larger population centers. The implementation of BLM's recreation area management plan could bring more tourists to the Wiseman area, as could the full opening of the Haul Road. Increased use of the Haul Road could provide both

increased cash income for Wiseman residents as well as increasing harvest competition from non-local hunters.

## E. Research Methodology

In the study of contemporary resource use patterns in the Upper Koyukuk region, Marcotte and Haynes qualify their representations of resource harvesting areas as follows:

> Since this report presents resource use data for a single year and portrays on maps areas used for resource harvesting during a two-year period, it must not be construed as a comprehensive examination of resource use patterns in the Upper Koyukuk region. Many factors can affect community and household participation in resource harvesting activities, including fluctuating species populations, inclement weather, seasonal wage employment opportunities, and other situations beyond the control of local residents. Consequently, the harvest levels, areas utilized and use patterns depicted later in this report may change in subsequent years. What is clearly evident, however, is the continued importance of fish, wildlife, and plant resources in the economies of Upper Koyukuk households and communities.
>
> (Marcotte and Haynes 1985, 32).

The efforts made in Chapter V to discuss factors influencing variation in quantities of resources harvested by Wiseman residents addresses this acknowledged importance of qualitative as well as quantitative data in portraying the livelihoods of rural Alaskan communities.

The reluctance I encountered for some households to participate in this study, and of all Wiseman households to participate in the mapping of renewable resource use

areas, is not unique to Wiseman. As was noted in the study of coastal communities of southwest Alaska:

> One strategy for dealing with the outside fish and game management system has been the careful control of information about traditional fishing and hunting practices. Until mechanisms for local participation in fish and game management have been assured, many residents believe that the less outsiders know about the details of traditional fishing and hunting practices, the less the local community will lose control over access to the resource base. Consequently, information about certain aspects of subsistence fishing and hunting, particularly harvest levels and specific harvest locations, are kept as propriety knowledge within the local group.
>
> (Wolfe et al. 1984, 535-536).

The Yukon-Charley proposal study noted that local residents had concerns regarding decisions affecting their use of resources:

> Proposed economic developments and/or new land classifications, such as the Yukon-Charley National Rivers, could have a profound impact upon the way of life of people -- both Native and white -- in Eagle, Eagle Village, Circle, Central, and along the Yukon River. Most local people fear that decisions affecting their lives will be made without regard to or knowledge of their needs, desires, or aspirations
>
> (Caulfield 1979, ii).

The procedure that evolved in the Wiseman research of maintaining open communication between community members and myself, and providing opportunities for area residents to give feedback on the work produced, is not unique. However, it is clear to me that documenting this process for future researchers is critical, as these techniques may help them get more locally appropriate and accurate information, and can instill local ownership in how the information can be used. Now that this information regarding the use of renewable resources by Wiseman community households has been publicly documented, however, only time will show how the information will be used by land and resource managers.

## F. Comments on the Role of the Subsistence Resource Commission

As was noted in Chapter X Section B, Subsistence Resource Commissions were set up under Section 808 of ANILCA to provide for local rural residents to have a "meaningful role" (Section 801 of ANILCA) in renewable resource management on Alaska's public lands. These commissions were to submit "subsistence hunting programs " to the Secretary of the Interior (ANILCA Section 808(a)). The Subsistence Resource Commission for Gates of the Arctic National Park adopted a "Subsistence Management Program" on March 13, 1987. The Acting Assistant Secretary for Fish and Wildlife and Parks responded for the Department of the Interior in a letter dated May 18, 1988. The Commission's Subsistence Management Program stated that:

> The Commission believes that because subsistence hunting is one component of a rural way of life encompassing a variety of resource uses that its program also needed to address other issues (e.g. access to sites used for hunting, criteria for issuance of permits, etc.) as well.
>
> (Subsistence Resource Commission 1987, 2).

The federal response from the Acting Assistant Secretary for Fish and Wildlife and Parks to this program noted that:

> . . . your submission goes beyond the congressional direction to prepare a subsistence hunting program for the park. The recommended program does not focus on subsistence hunting, but addresses a variety of management issues that, while important, are not all related to subsistence hunting.
>
> (Reece 1988).

The Commission was requested to evaluate their program and resubmit a park hunting plan (ibid.).

A revised plan was adopted by the Commission on February 26, 1992, and the Deputy for Fish and Wildlife and Parks responded to the revised plan in a letter dated

December 3 1992. This revised plan was not fully accepted by the Interior Department, and the Commission was encouraged to " . . . continue to make appropriate recommendations pertaining to subsistence hunting issues within the park in accordance with Section 808 of ANILCA" (Letter to Commission Chairman from the Deputy Assistant Secretary for Fish and Wildlife and Parks, 1992).

Given the response times (approximately fourteen months and nine months) of the Interior Department to the Commission's subsistence hunting program recommendations, and the general tendency towards lack of implementation of a recommended program, the question raised by Caulfield in 1988 regarding the effectiveness of the role of all Subsistence Resource Commissions appears to need consideration:

> The question . . . is whether the subsistence resource commissions are simply to be an extension of the existing 'state system' of resource management [previously defined as one '. . . based upon a common property concept in which the (government) has full and exclusive responsibility for resource management for the benefit of all citizens . . . '] or whether their congressional mandate will result in the meaningful inclusion of the views of local people in park management. In short, will they be vehicles for cooperation or co-optation?
>
> (Caulfield 1988, 62).

A specific example of this cooperation versus co-option issue can be illustrated by the ongoing discussion between the Subsistence Resource Commission for Gates of the Arctic National Park and the NPS regarding the designation of traditional use areas. In the Subsistence Hunting Plan adopted February 26, 1992 by the Subsistence Resource Commission, Recommendation #3, Areas of Traditional Use, states:

> Congress provided that subsistence uses would be allowed in the Gates of the Arctic National Park where such uses are traditional, and that those uses would be allowed without qualification. The Commission recommends that the entire park be generally classified as a traditional use area, PROVIDED that when a

wild, renewable resource must be protected in a specific area, the NPS will take appropriate steps to protect that resource until the resource reaches a harvestable level recommended by the Commission (emphasis in the original).

Discussion of Recommendation 3:

The Commission's recommendation is based on past testimony from village elders, local residents and other parties, which was emphatically opposed to delineated traditional use areas and research of applicable traditional use areas studies. The research material available proved inconclusive to identify all specific traditional use areas and many of the local residents knowledgeable on use areas since the establishment of local communities are deceased. The research also demonstrates, however, that all reasonably accessible areas of the park have been utilized by subsistence users over time. Additionally, the Commission found no evidence to specifically exclude any lands from designation as a traditional use area.

This recommendation is not made lightly. It is consistent with, if not compelled by, the intent of Title VIII. It is a feasible method in which the NPS can manage and limit the taking of resources without being detrimental to the satisfaction of subsistence needs of local residents. It is more logical to monitor shifting game populations than to monitor specific use areas in order to protect the resources. Also, the use of resident zones and access limitations add to the effectiveness of the implementation of this recommendation, which has in effect been the policy for the past ten years.

(Subsistence Resource Commission 1992, 3-4).

The first Subsistence Management Program (adopted March 13, 1987) states in its Recommendation #4, Areas of Traditional Use, that:

... the Commission has reviewed the suggestion that formally-designated mapped traditional use areas be established. However, after hearing overwhelming opposition to such a concept from local rural residents, and after evaluating the impact of such a scheme on subsistence users and park values, the Commission recommends that such designations not be made. Such designations are not considered necessary to meet Congressional intent, and would likely be culturally inappropriate, administratively cumbersome, and unduly arbitrary.

(Subsistence Resource Commission 1987, 9).

The response from the Acting Assistant Secretary for Fish and Wildlife and Parks to this management program included the following comments:

> We believe that the Commission, in conjunction with local communities and the National Park Service, should analyze the patterns of subsistence use following establishment of each community and develop a definition of traditional subsistence use areas by community.
>
> (Reece 1988).

Prior to the submission of the first Subsistence Resource Commission subsistence management program, the Alaska Legal Services Corporation compiled a report on subsistence in Gates of the Arctic National Park. Comments in this report include the following:

> With respect to the question of designating and mapping so-called "traditional use areas," our analysis leads us to the conclusion that the formal designation and mapping of such areas within the park is not required by the law, may in fact be prohibited by the law, and in any event is undesirable and inappropriate at the present time. . . . The often repeated and clear-cut recognition of the fluctuations in the location and movement of wildlife resources is difficult to square with the notion that customary and traditional subsistence hunting can be defined with precise boundaries on a map. At best, the law authorizes, but does not require, such precise line-drawing. (Emphasis in the original).
>
> (Alaska Legal Services Corporation 1985, 17,20).

In the "Preliminary Report, Subsistence Activities, Proposed Gates of the Arctic National Park" (1977), Bane and Nelson stated:

> Such variability (that characterizes subsistence harvests in this environment) manifests itself in two ways: First, some primary subsistence species are subject to marked shifts in distribution over periods of a year or more. For example, caribou herds may concentrate within the proposal area one year, then occur very sparsely another year (or part of a year). Second, nearly all resource species experience drastic changes in overall population levels, with resultant fluctuation in subsistence harvests. These changes can virtually eliminate the use of a

> declining species, and greatly accelerate the use of common or increasing species.
>
> Changes in the distribution and population of resource species impose constant instability upon subsistence activities. No single region is ever utilized the same way for two consecutive years - emphasis shifts from one species to another, from one area to another, as the resource picture undergoes its natural evolution. (Bane, Nelson 1977, 2,3).

Three resolutions: 85-01, 86-04, and 86-11, regarding the designation of traditional use areas, have also been passed by the Subsistence Resource Commission. According to the park Superintendent, as of May 1992, no action on these Resolutions or on the issue of the potential designation of subsistence use areas has been taken since 1986. These references point to the fact that the mapping of subsistence resource use areas in Gates of the Arctic National Park has been an issue of major concern to local subsistence users and to the NPS since the time the park area was proposed as a conservation unit. There is a history of conflicting interpretations of the intent of ANILCA in regards to subsistence use area designation, and of repeated attempts by the Subsistence Resource Commission to pass recommendations and resolutions on the issue. To date, these attempts appear to have been ineffective in resolving the issue. One wonders if, as Caulfield (1988) noted, there has been a "... meaningful inclusion of the views of local people in park management" on this issue.

## G. Summary of Comparative Analysis

Wiseman is not unique among rural Alaskan communities in its non-Native character, although studies of such communities are few in number. Both Bishop and Caulfield have conducted studies in predominantly non-Native rural population centers in Alaska, and their findings that ". . . it is not difficult to find an Alaskan Native and an Alaskan non-Native living in a rural area doing basically the same kind of work, with the same kind of equipment, in order to make a similar living" (Bishop 1978, 50), and " . . . traditional knowledge and skills are being in part perpetuated by non-Natives" (Caulfield 1979, 87) are consistent with my findings regarding renewable resource use activities of Wiseman residents. Comments regarding the heavy reliance on renewable resources by non-Native inhabitants of the central Brooks Range (Anderson et al. 1977, 582-585; Nelson, Mautner, and Bane 1982, 26) are also consistent with observations and data from the Wiseman community.

Activities in Wiseman tend to follow a pattern, or seasonal round, that is based on the allowed times for hunting and trapping. Variations in this seasonal round are controlled by the factors of weather and travel conditions. There are no significant fish populations in the Wiseman area. Therefore, unlike other rural interior communities such as Eagle (Caulfield 1979) and communities downriver from Wiseman (Marcotte and Haynes 1985), Wiseman residents must rely on hunting activities for the majority of their meat supply. In addition, there are no local fish camps, so summer tends to be the main season for wage employment activity.

Wage employment provides the cash sector of Wiseman's mixed subsistence/cash economy. As local employment opportunities tend to be seasonal and insecure, the harvest of renewable resources, the "subsistence sector" of the local economy, is

critical to maintaining a household in the community. Currently no Wiseman households hold year-round wage employment. Wiseman wage employment opportunities currently tend to focus on non-local commercial fishing, local tourist services and occasional road construction, some mining, and work in Coldfoot. Permanent federal agency employment (such as with the NPS, BLM, or Federal Aviation Administration) and community service positions (such as postal clerk, school, and power plant operator) that are available in downriver communities are not available in Wiseman. Not all households would accept such employment of it were available, as year-round employment interferes with employment in renewable resource harvest activities.

A direct correlation appears to exist among Wiseman households between the degree of investment in equipment utilized in harvesting renewable resources, and the degree of activity in that harvest. The more equipment owned by the household, the greater the ability to participate in resource harvest activities.

Social characterizations of a rural Alaskan community based on a mixed subsistence/cash economy also apply to Wiseman. Meat is shared among households in the community, and the bartering of renewable resource products occurs. Members of different but not necessarily related households participate in harvest activities together. Wiseman residents think the rural community lifestyle, in which utilization of local renewable resources plays a significant role, has intrinsic value. This lifestyle is the preferred lifestyle.

Wiseman residents respect traditional rights of trapline and wood yard ownership, but hunting areas are not subject to concepts of household usufruct rights. Opportunities to hunt and harvest vegetation are currently available to all Wiseman community residents. This eligibility equality would be changed if NPS management

policies changed from the resident zone concept to individual permits for allowing households to utilize park resources.

Wiseman is situated on a road that is maintained year-round. This access provides both opportunities and constraints for the lifestyle. Development of the Haul Road corridor could provide both increased opportunities for Wiseman households to gain cash income and easier access to public services in Fairbanks, but also may result in increased competition from non-locals in the harvest of local renewable resources.

The effectiveness of the Gates of the Arctic Subsistence Resource Commission needs to be examined. Are the Commission's recommendations being accepted and implemented by the Department of the Interior in light of congressional mandates for meaningful input of local rural residents in the management of fish, wildlife, and subsistence uses in Gates of the Arctic National Park? (See Caulfield 1988).

Research in rural Alaskan communities needs to address qualitative aspects of variation in resource harvest over time, in addition to determining quantitative information. This study demonstrates that the reluctance to share information in an unreserved way on resource harvest activities is not unique to Wiseman, and can be addressed in part by maintaining frequent and open communication channels with community members, and involving households in the design and implementation of the research process.

# XII. CONCLUSIONS AND RECOMMENDATIONS

## A. Conclusions

Wiseman is a community currently comprised of ten households, six of which contain young children. Looking at the area through time, it appears that Wiseman residents have always depended on surrounding renewable resources for support. Today these resources are found on land in Gates of the Arctic National Park and Preserve, in the Haul Road corridor, and on other BLM land, state land, and private land. The community was established to support local mining activities, and was comprised of both Native and non-Native members. In historic times, these mining activities provided income with which supplies (including wild game) and equipment were obtained. The settlement of Nolan is still based around mining activities, and households who reside in the area outside Wiseman and Nolan also focus on mining activities. Non-resident Wiseman property owners tend to have extensive historic knowledge of and ties to the area, but do not consider Wiseman a place to live on a permanent basis.

In contemporary times Wiseman residents' income comes primarily through seasonal employment within and outside the area, little of which is related to mining. Wiseman's economy is one based on a mix of subsistence and cash. Residents depend on the local renewable resources to support their livelihoods. This makes Wiseman's economic system similar to that of other rural Alaskan communities.

Wiseman residents also tend to follow a seasonal round of activities based on the opportunities to harvest resources and engage in seasonal wage employment. Harvested resources, particularly meat, are shared among households in Wiseman, regardless of family ties. The quantity of game harvested by residents is based on household needs. Need varies with the size and age composition of the individual households.

Wiseman trappers consider all of the drainages within direct snow machine and dog team access of Wiseman to be occupied according to usufruct rights. Over the years there is significant variation in number of furbearers harvested by Wiseman trappers, primarily because of the cyclical nature of furbearer population densities, the variation in weather and snow conditions, and the level of experience of the individual trapper.

Variation in Wiseman household game harvest is caused primarily by the movement and numerical change of species populations and changes over time in land management policies that regulate hunting activity and methods of access in the area. The degree of hunting competition from non-local hunters is also a factor affecting Wiseman resident game harvest. The establishment of Gates of the Arctic National Park and Preserve in 1980 affected Wiseman harvest patterns, as those households who used aircraft or three-wheelers as a means of transportation to the park for harvesting purposes could no longer use these methods. Harvest of park resources continues to occur using snow machines and occasionally foot access.

A 1972 study of the Wiseman Historical District noted that:

> Wiseman today is on the edge of change and new events. The town is located on the corridor set aside for the proposed trans-Alaska pipeline. Much could happen to the quiet, peaceful town once construction begins.
>
> (Thompson 1972, 27).

Construction did bring long-term changes to Wiseman. With the opening of the Haul Road, people who did not have access to aircraft can now get to Wiseman on the road. Supplies and equipment can now be driven to Wiseman. Not only has the Haul Road provided for easier access to the area, but implementation of BLM's plan for recreational facility developments along the road may result in an increased number of tourists visiting the area. Local businesses that cater to tourists may benefit from this increased tourism. BLM's proposed resource management plan for the corridor involves opening lands to mineral entry and oil and gas leasing, which would also result in more people in the area, and may also provide local employment opportunities.

The increase in the number of facilities for Haul Road travelers, combined with the possibility that the Haul Road will become legally open along its length all year to the general public, raises the potential for negative impacts on the area's renewable resources, particularly an increase in the number of non-local hunters using the area to harvest game. The 1992 opening of the corridor to local resident firearm hunting provided local residents with easier access to the local big game populations.

The level of future enforcement of regulations designed to protect the area's game populations is unknown. Non-local hunters compete with area residents for resources. However, permanent residents of resident zone communities of Gates of the Arctic National Park currently have an exclusive right to harvest resources in the park. Wiseman is a resident zone community, therefore Wiseman residents can harvest park resources without competition. However, practical access during periods of no snow cover (which usually encompasses the fall hunting season) means entering the park on foot from the Nolan road. After freeze-up hunters can travel directly to the park by snow machine.

The information presented in this thesis is important because little research has been done in rural Alaskan areas addressing the use of renewable resources by non-Native residents, and many of the studies referenced here were done in the 1970s. The methodology that evolved in this research focused on repetitive and lengthy visits to the study area which provided the researcher with a broad-based context for understanding the data, and numerous opportunities for local residents to comment on and contribute to the research process. This approach provided for comprehensive documentation of the relationship between rural residents and the local renewable resources, and a picture of how the various federal and state land and resource management policies provide opportunities and constraints for Wiseman resource users.

This thesis is also significant because it attempts to provide a picture from the local perspective on life in Wiseman today. This picture includes how the community has changed over time, how the human demographics have changed, and what the impacts of changing government land and resource management policies have been on the local lifestyle. Management agencies may wish to consider these impacts and community dynamics when working with local residents, and when implementing land and resource management policies.

## B. Recommendations

### (1) Cooperative Agreement on Resource Management and Monitoring:

Wiseman residents are private citizens who utilize public resources, and their use is, by law, monitored and regulated. The government agencies entrusted with managing the land and resources are responsible for this monitoring and regulation. In the case of the Wiseman area, little monitoring has previously occurred. The findings in this thesis could be the basis for establishing a cooperative community/agency agreement on renewable resource use management and monitoring. Participation of local residents in such an agreement might enhance regulatory compliance, and resource protection.

### (2) Community Involvement in Research:

Studies regarding rural resident resource use can and should engage community members in the planning, execution, and review stages of the research. Residents should be asked to participate in the design of the study, and the survey questions should reflect their concerns, as well as the concerns of the agency or agencies involved. In order to understand the data reported or gathered through questionnaires, researchers should spend frequent and lengthy observation periods in the community during various seasons so they can place the information in an

appropriate context. Studies should also incorporate ongoing evaluation of how the research affects the community.

**(3) Cooperation Among Agencies:**

As Wiseman residents' use of resources are regulated by the NPS, the BLM, and the State of Alaska, cooperation of the various regulatory agencies is in the best interests of the resources and the resource users.

**(4) Importance of the Community:**

Wiseman represents "home" to the people who live there. If the Wiseman resident zone was to be discontinued, and individual use permits designating eligibility to harvest park resources issued only to some households, the community would be split into "haves" and "have nots." Considering that all Wiseman households spoke against the implementation of individual use permits, harvested resources are shared in the community, and the community is currently small and apparently has relatively little impact on park resources, it is not advisable to divide the community in this manner. Prior to and following the park's establishment, all permanent residents of the community, regardless of when they arrived in the area, have been able to harvest resources in the park area. If this policy were now to be changed, the NPS needs to

consider impacts to the social fabric of the community. Although it is not my purpose to make policy statements in this thesis, the information it contains will be useful in addressing this issue.

Community residents must also recognize that the NPS has to consider possibilities for potential growth in resident zone communities, and their impact on park resources. Wiseman is located on a road. Future growth of the human population is conceivable given current state plans for the full opening of the Haul Road to the public, and the development of recreational facilities along the road. Both of these plans could provide local employment opportunities, which could make the community more attractive for permanent residency. Although the price is high, Wiseman private lots may be sold to people who decide to become permanent residents, and the Native allotments may be subdivided and sold, providing more living space for more residents. In light of past demographic changes, the community should acknowledge possibilities for future community growth, and determine now how they, as a community, prefer to approach management implications regarding eligibility to harvest park resources should significant community growth occur.

**(5) Considerations of Agency Staffing:**

There is a tendency for a high turnover of government agency personnel. Attendant on personnel turnover is the loss of knowledge and experience with issues that affect local residents' use of renewable resources. Agencies should institute a

vigorous training program for new managers, consisting of both education on the resource issues of the area, and the history of the area. Agency personnel who deal with resource management must be people-oriented. Patience, repetition, and tolerance of the opinions of others is necessary for mutual education of views and cooperation in managing resources. Managers must have a willingness to try to accommodate local interests when possible. If agency seasonals or field workers who contact local residents are not responsible for management decisions, they should be instructed to write down any resource issue raised by local residents, and transmit it to whoever is in a management position. The manager should then address the issue with the local resident directly. This will help to avoid miscommunication and potential conflicts. Due to the change to federal management of "subsistence" on federal public lands, the BLM needs to fund a position in each BLM district whose sole responsibility is "subsistence management" on BLM lands.

### (6) Local Resident Participation in Management Decisions

Local residents need to find ways to formally express their concerns to land and resource managers, and to participate more fully in management decisions through sharing their knowledge and perspectives. The current system of advisory committees comprised of volunteers does not appear to be particularly effective in making the concerns and recommendations of local residents heard by land and resource managers. Concerns and recommendations made by local residents need to be addressed and specifically acted upon.

**(7) Nolan**

Nolan is located at a known road access point into the park. Nolan residents live closer to Gates of the Arctic National Park boundary than Wiseman residents, and have the potential to impact park resources. As a result, the issue of eligibility criteria for rights to harvest park resources needs to be addressed with Nolan residents. Dialogue between Nolan residents and NPS managers could promote understanding of both NPS mandates and regulations and Nolan viewpoints. The information in this thesis will be useful in understanding local livelihoods and overall patterns of renewable resource use by residents of the Wiseman area, including Nolan residents.

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# XIV. APPENDICES

# APPENDIX A

## COMMENTS FROM RESIDENTS ON THIS THESIS

Specific comments received from Wiseman area residents on the final draft of this thesis dealt with a handful of specific technical corrections. The schedule for review by local residents of the work as it progressed appears in Table 2 of the main body of the thesis.

## APPENDIX B

## PREVIOUS WISEMAN HISTORICAL STUDIES

There has been interest in the last two decades in the historical significance of Wiseman. In her 1972 Historical Study of the Wiseman District, Thompson concluded: "Because of the significant and colorful history of the little arctic [sic] town, major efforts should be taken to protect, restore and interpret Wiseman and the surrounding area" (Thompson 1972, 28). This study was conducted prior to the construction of the Trans-Alaska Oil Pipeline and Haul Road, and Thompson's concerns were for the potential for change: "Much could happen to the quiet, peaceful town once construction begins" (Thompson 1972, 27).

Volume II of William Brown's Historic Resources Study for Gates of the Arctic National Park and Preserve describes nistoric sites found in the Gates of the Arctic National Park and Preserve area:

> . . . a total of thirty-three historic sites were surveyed within the eastern sector of the Gates of the Arctic National Park and Preserve and adjacent area to the east along the Dalton Highway. Of these thirty-three sites, five were associated with trapping/hunting activities; eleven were associated with drift mining; ten were miner's cabins; three were shelter cabins; one was a woodchoppers cabin; and the remaining three [one of which was the Wiseman Cemetery] were miscellaneous sites.
>
> (Brown 1988, 2: II-7).

All thirty-three of these sites are in the Wiseman study area. The additional historic

site added to the park's inventory in 1985, Ernie Johnson's cabin on Ernie Lake, (Brown 1988, 2:II-9) is outside the Wiseman study area. In his introduction, Brown gives an overall perspective of the historic resources on Gates of the Arctic National Park and Preserve:

> Over most of the parkland proper (i.e., 95 percent of it) the norm for historic-period standing structural remains or accumulations of artifacts is extreme rarity, phasing out to total absence in vast swaths of country. Isolation and prevailing patterns of nomadic, transient traverse saw to that. A few trappers' line cabins--most in ruins--may be seen along the south flank of the range in forested areas, along with a few postwar hunting cabins and camps lost amidst the expanse of valleys, lakes, and mountains. As to visible human signs (not counting the hundreds of obscure prehistoric sites) the country has held itself in trust. For conventional field history, then, the kind that leaves discernable [sic] sites on the landscape, the mining history on North Fork [of the Koyukuk]-Glacier rivers is about all we have got.
>
> (Brown 1998, 2:II-2-3).

In 1985, both the State Historic Preservation Officer and the Secretary of the Interior determined that the Wiseman Historic District (the village of Wiseman excluding the Native allotments) was eligible for listing in the National Register of Historic Places (in Brown 1988, 2: no page number). In a letter to Bill Bushong, Office of the Keeper of the National Register, Judith E. Bittner, State Historic Preservation Officer (for Neil C. Johannsen, Director) justifies the recommendation of the Wiseman Historic District to the National Register of Historic Places:

> After examining the information available, it is the professional judgement [sic] of my staff that the Wiseman historic District meets the criteria for the National Register of Historic Places. It is the only gold rush era town that remains intact and essentially unchanged from the days of the gold rush on the Middle Fork of the Koyukuk River. It is significant in the history of the area, and it is representative of the broad patterns of development that took place in Alaska . . . Wiseman is one of a few towns remaining from this period in Interior Alaska, and one of fewer still that remains relatively unchanged by development and growth.

> Each of the contributing structures in the Wiseman Historic District is representative of the basic log cabin architecture that was prevalent at the time of the town's development. What is significant about Wiseman is that the configuration of these structures in relationship to one another remains intact and undisturbed by intrusions. The architecture and the location of the structures reflect the lifeways of the early mining frontier in Alaska. Other towns of this era have either succumbed to the elements, or have gone on to become major centers of population such as Fairbanks or Nome.
>
> The gold mining that took place on the Middle Fork of the Koyukuk during the first three decades of this century is representative of the type of exploration and mining that took place throughout Alaska during this period, and the individuals who settled Wiseman, as described in Robert Marshall's Arctic Village, are similar to those who developed many small camps and villages throughout Alaska. Wiseman is one of the few that remain.
>
> (in Brown 1988, 2: no page number).

According to both Wiseman local residents and non-resident property owners, there was initial local support for the nomination of the Wiseman Historic District to the National Register of Historic Places. One resident noted that if Wiseman were to become so listed, alterations to any of the existing structures would be severely regulated. Another property owner further explained that rejection of the listing occurred once it was discovered that upon the death of the owner of the Wiseman structures (the land was still owned by the BLM at this time), ownership would revert to the NPS. Apparently, both of these conditions were unacceptable to cabin owners. Further investigations, however, show that these conditions may not have been accurately presented to and/or understood by cabin owners. The current NPS Regional Historian and Historic Preservation Officer said that in fact, the NPS does not have property rights over private property that has been listed on the National Register, regardless of change in ownership. Additionally, this individual noted that if cabins are altered in such a way as to be classified "rehabilitated" instead of "restored," then they will be taken off the register. Restoration protects the historic integrity of the structure.

## APPENDIX C

## WISEMAN STUDY SURVEY FORMS

### SURVEY # 1. INITIAL SURVEY

### WISEMAN SUBSISTENCE STUDY

**Interviewer:** I am _____ from the University of Alaska Fairbanks, conducting a study of subsistence activities of the people of Wiseman. This study is funded by the National Park Service through the Agricultural and Forestry Experiment Station of the University.

We thank you for your willingness to participate, and will be glad to answer any questions you may have about the process. We will be interviewing all residents using the same interview form. If there are any residents who are not in the village at the present time, please let me know so we can contact them later.

It will be conducted in three parts: the first part on hunting, fishing, and other harvest patterns, that will be completed through the interview process; the second, an interview using maps to determine where those patterns actually occurred; and the third, an interview on your ideas and beliefs about subsistence. Each of these may take considerable time; so if you like, we can take a break in-between each part. All parts will be audiotaped with your written permission.

---

| _____ | _____ | _____ | _____ |
|---|---|---|---|
| Community | Household ID | Date/Time | Interviewer |

## PART 1. ACTIVITIES, HARVESTS, AND TEMPORAL PATTERNS

**INSTRUCTIONS:** Please complete all 5 sections of part 1.

**Section 1.** Residential and Family Information.

Q1. Household Information. Please complete the following Table:

| I.D. No. Household Relationship | M /F | Birth Year | Residence of Parents When You Were Born | Length of Residence Here | Employed in 1991? (job title) | Part-time or Full | Which Months Worked in the year | Location of Job |
|---|---|---|---|---|---|---|---|---|
| 1. | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | | | | | |
| 4. | | | | | | | | |
| 5. | | | | | | | | |
| 6. | | | | | | | | |
| 7. | | | | | | | | |
| 8. | | | | | | | | |

Q2. Please tell me who in your household actually participates in the following subsistence activities. I will circle the numbers used in question #1.

Circle Answer As Many As Applies.

| | |
|---|---|
| Big Game Hunting | 1 2 3 4 5 0 |
| Small Game Hunting | 1 2 3 4 5 0 |
| Fishing | 1 2 3 4 5 0 |
| Trapping | 1 2 3 4 5 0 |
| Wood Gathering | 1 2 3 4 5 0 |
| Berry Picking | 1 2 3 4 5 0 |
| Plant Gathering | 1 2 3 4 5 0 |
| Butchering | 1 2 3 4 5 0 |
| Food Preservation | 1 2 3 4 5 0 |
| Hauling Water | 1 2 3 4 5 0 |
| Cutting Trails | 1 2 3 4 5 0 |
| Other (List) | 1 2 3 4 5 0 |
| | 1 2 3 4 5 0 |
| | 1 2 3 4 5 0 |

Q2a. Based on your recall, please tell me who in your grandparents and parents household(s) participated in the same subsistence activities.

Circle Answer As Many As Applies.

| | |
|---|---|
| Big Game Hunting | 1 2 3 4 5 0 |
| Small Game Hunting | 1 2 3 4 5 0 |
| Fishing | 1 2 3 4 5 0 |
| Trapping | 1 2 3 4 5 0 |
| Wood Gathering | 1 2 3 4 5 0 |
| Berry Picking | 1 2 3 4 5 0 |
| Plant Gathering | 1 2 3 4 5 0 |
| Butchering | 1 2 3 4 5 0 |
| Food Preservation | 1 2 3 4 5 0 |
| Hauling Water | 1 2 3 4 5 0 |
| Cutting Trails | 1 2 3 4 5 0 |
| Other (List) | 1 2 3 4 5 0 |
| | 1 2 3 4 5 0 |
| | 1 2 3 4 5 0 |

Section 2. Activities, Harvest, and Participation.

**Q1. Please look at the following table on game harvest. I will ask you to help me complete this table:**

**The table included columns headed:**

Quantity Harvested in 1991
Approximate # Animals, or Portions Rec'd From Other Households
Relationship of Those Received From
Method of Preservation
Amount: # of animals, or portions of animal (Check all that applies)
- Eaten
- Given away
- Traded or Sold
- Other (specify)

Typical one-way Distance Traveled From Village to Harvest Area (Miles)
Average Length of Trip (days)
No. of Trips Taken (1991)
Methods of Transportation

Seasons of Harvest Activity
1991 (Check All Months That Apply)
J F M A M J J A S O N D

**The species listed in this table were:**

Moose, Caribou, Sheep, Black Bear, Brown Bear, Hare, Porcupine, Squirrel, Other, Geese, Ducks, Ptarmigan, Grouse, Other Mammals, Other Birds, Other Products.

a. Did you harvest more than one species on any 1991 trip? Please describe (on back).

**Q2. Please look at the following table on fish harvest. I will ask you to help me complete this table.**

**The table included columns headed:**

Quantity Harvested in 1991
Fish Rec'd From Other Households
Relationship of Those Received From
Method of Harvest
Method of Preservation
# Fish
Eaten
Given away
Traded or Sold
Other (specify)
Typical one-way Distance Traveled From Village to Harvest Fish
Average Length of Trip (days)
No. of Trips Taken
Method of Transportation
Seasons of Harvest
1991 (Check All Months That Apply)
J F M A M J J A S O N D

**The species listed in this table were:**

King Salmon, Summer Chum, Fall Chum, Sheefish, Whitefish, Pike, Grayling, Sucker, Burbot, Black Fish, Other.

a. Did you harvest more than one species on any 1991 trip. Please describe.

b. Did you engage in commercial fishing? Where?

c. Do you engage in harvesting fish elsewhere in the state? Where?

**Q3. Please look at the following table on furbearer harvest. I will ask you to help me complete this table.**

**The table included columns headed:**

Quantity Harvested in 1991
Amount Rec'd From Other Households
Relationship of Those Received From
Method of Pelt Preservation (salting, drying, or tanning)
Number of Pelts
- Sold
- Traded
- Given away
- Used in Household

Use of Carcass (bait, household food, dog food, other)
Distance Traveled (Miles)
- To Line
- On Line

Method of Transportation
No. of Traps Set
Seasons of Harvest
- 1991 (Check All Months That Apply)
  - J F M A M J J A S O N D

**The species listed in this table were:**

Wolf, Fox, Wolverine, Lynx, Otter, Beaver, Marten, Muskrat, Other.

How often did you check your traps last winter?

How long did it take you to check your trapline (how long were you gone from home for each trip?)

How did you acquire the line?

No. of years on the trapline.

Who trapped it before you? (Name and address if possible and are they related to you?)

Partner(s)? Who?

Do you run different traplines in different years? Do you claim any traplines that you do not trap every year?

What type of traps do you use? Leghold, conibear, snare, or other. Be specific by species if possible.

Does the market price of pelts affect your trapping patterns? Explain.

Q4. Please look at the following on berry, plant, and wood gathering. I will ask you to help me complete this form.
a. Berries and Plants Harvested in 1991.

| SPECIES | AMT HARVESTED (Quarts) | AMT RECEIVED FROM OTHERS (Quarts) | HOW WERE THEY PRESERVED AND CONSUMED |
|---|---|---|---|
| Blueberries | | | |
| Lowbush Cranberries | | | |
| Highbush Cranberries | | | |
| Blackberries | | | |
| Raspberries | | | |
| Rose Hips | | | |
| Roots | | | |
| Medicinals: | | | |
| Species | | | |
| Other | | | |

b. Wood gathered in 1991 (cords). A cord is 8 feet long, 4 feet wide and 4 feet high.

| KIND (Species) | AMOUNT | AMOUNT RECEIVED FROM OTHERS | HOW USED (heating, construction, smoking fish/meat, crafts, etc. |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Q5. Was your level of harvesting activities in 1991 (number of trips and average length per trip) about the same, more, or less than the previous five years. Explain if more or less.

| Activity | Same, more or less | Briefly explain for each |
|---|---|---|
| a. Moose hunting | | |
| b. Caribou hunting | | |
| c. Bear hunting | | |
| d. Trapping | | |
| e. Wood gathering | | |
| f. Berry picking | | |
| g. Plant gathering | | |
| h. Small game hunting | | |
| i. Fishing | | |
| j. Other | | |

Q5 a. Did you conduct subsistence activities prior to 1980? What years? Where did you conduct these activities? Please be as specific as possible.

Q6. Please look at this table. Did you use any cabins when doing the following subsistence activities?

| Activity | Yes or No | Who owns | Help Construct Yes or No | Typical length of stay per trip |
|---|---|---|---|---|
| a. Moose Hunting | | | | |
| b. Caribou Hunting | | | | |
| c. Bear Hunting | | | | |
| d. Trapping | | | | |
| c. Wood Gathering | | | | |
| f. Berry Picking | | | | |
| g. Plant Gathering | | | | |
| h. Small game hunting | | | | |
| i. Fishing | | | | |
| j. Other | | | | |

Q7. How many of the following were used by your household in subsistence activities? Circle all that apply. What is the estimated value of the items?

a. Boats_____
b. Snowmachines _____
c. 3 or 4 wheelers_____
d. Track vehicles_____
e. Sled dogs (No. of dogs _____)
f. Fish camps (Where?)
g. Freezer_____
h. Smokehouse_____
i. Airplane (Type? _____)
j. Other (List _____)

Q8. Estimate the 1991 costs of operation and maintenance, for all items listed above:

estimated cost (nearest $100 dollars) $_____

Q9. a. Did you have a garden in 1991? Yes or No
b. What crops did you raise? Please give the approximate amounts harvested of each crop (bushels or pounds).

**Section 3.** Social and Economic Data

Q1. Do you or did you teach your children how to do subsistence activities? Yes or No. Please explain why in either case.

Q2. Do you make articles, clothing, etc., out of parts of plants and animals? Yes or No. If yes, please describe what you make. Indicate which items are essential for personal use, and which items are for sale.

Q3. Did you sell any of the items in Q2 in 1991? Yes or No. If yes, please identify the items and their value.

Q4. Did you barter or trade any parts of plants or animals in 1991? Yes or No. If yes, please identify those items bartered or traded, and what you obtained in the process. Was this different from previous years?

Q5. What was your approximate household income in 1991? Circle the nearest category.

a. $0 - $ 2,500
b. $ 2,501 - 5,000
c. $ 5,001 - 10,000
d. $10,001 - 20,000
f. $30,001 - 40,000
g. $40,001 - 50,000
h. greater than $50,001

Q6. What are your sources of income and the approximate percentage of total income?

| Source | Percent of Total Income |
|---|---|
| Job (Whether self-employment or working for someone) | _____ |
| Trapline | _____ |
| Articles made | _____ |
| Animal or fish parts sold | _____ |
| Other _____ | _____ |
| | 100% |

Q7 a. Give approximate percentages of the following household goods and materials that come from harvest of subsistence resources. For example, if about 70% of all your food comes from subsistence resources, list 70%.

| Goods and Materials | Percent Obtained From Subsistence Resources in 1991 |
|---|---|
| Foods | _____ |
| Clothing | _____ |
| Heating | _____ |
| Building Construction | _____ |
| Other List _____ | _____ |

b. Is this different from the past? If so, please describe.

**Section 4.** Community Dynamics

Q1. How many residents/families in Wiseman do you know? Please list them.

Q2. How has the population of Wiseman changed since you have lived here?

Q3. Do you know of former Wiseman residents living elsewhere? Please list them.

Q4. Who has moved away since 1980?

Q5. Who has moved in since 1980?

Q6. Were there any part-time residents in 1991 (i.e., stayed for a few months and left or owned a cabin and visited periodically)?
a. Total Number _____

b. Give Names if possible:

Q7. How would you distinguish between a part-time area resident and a full-time area resident?

## PART 2. SUBSISTENCE USE MAPPING

This part of this of the interview will be audiotaped. I will be here with you, and label all areas as you draw on the mylar overlay. I have a series of specific activities I would like for you to locate on the overlay. (Give responders this set of questions.)

Q1. Outline the 'Wiseman Area'.

Q2. Locate hunting areas, kill locations, fishing areas, and harvest areas for the following resources that you have used since you have resided in the Wiseman area:

Game
moose, caribou, sheep, brown bear, black bear, small game, birds, other (be specific).
Fish
grayling, lake trout, Arctic char, sheefish, pike, black fish, salmon (king, dog, silver), burbot, sucker, other.
Vegetation
blueberries, lowbush cranberries, highbush cranberries, blackberries, raspberries, rose hips, roots, medicinals, other.
Wood
spruce, birch, cottonwood, willow, other.

Q3. Mark your access routes to these areas.

Q4. Locate on the map the traplines you have used while you have resided in the Wiseman area. What years did you use each line?

Q5. Outline areas that you know or have been told would be good areas to hunt, fish, or harvest vegetation. Explain how you know about these areas of potential use, and under what conditions you would consider these areas to be useful to you for subsistence purposes.

Q6. Mark the areas or locations of any other subsistence use activity past or present, whether personally used or known of. Explain that use.

Q7. If you hunt, fish, or trap elsewhere in the state, specify these locations on the state map, by individual species. How were these resources acquired (commercial, sport, subsistence harvests)?

# PART 3. PERCEPTIONS OF SUBSISTENCE PRACTICES AND MANAGEMENT

## Section 1. What is Subsistence?

Q1. How do you define subsistence?
Q2. What activities do you associate with the subsistence lifestyle, and how crucial are they to maintaining the subsistence lifestyle?
  a. Hunting and Fishing
  b. Gathering of herbal products
  c. Firewood cutting
  d. Trapping
  e. Building line shelters, caches, etc.
Q3. What is the principal difference, if any, between personal use harvesting and subsistence harvesting?
Q4. What is "sport hunting" and how does it differ from subsistence hunting?
Q5. Is there a distinction between "subsistence trapping" and "commercial trapping"? Please explain.
Q6. Should there be an "economic need" criterion to qualify for subsistence privileges?
Q7. How do you define customary and traditional use of a resource?
Q8. Should subsistence priority designation be extended to new individuals who have no current or historical familial or cultural traditions of subsistence hunting in the Wiseman area? In general?
Q9. How and from whom did you learn about subsistence practices? Where did you learn this?

## Section 2. Describing the Wiseman Residence Area.

Q1. In geographic terms, how would you describe the Wiseman subsistence residence zone, regardless of official definitions?
Q2. Is Wiseman, taken as a whole, a subsistence dependent community?
Q3. Is Wiseman dependent upon Coldfoot for commercial goods and services?
Q4. What geographic areas are essential for your family's well-being?

## Section 3. Individual Subsistence Activity.

Q1. Do you run a trapline? If so, do you run different lines in different years? If yes, why do you run different lines in different years?
Q2. Do you share your subsistence products with other people?

Q3. At the current time, do you share your products more or less than you have in previous years?
Q4. What influences your ability to share products less or more?

**Section 4. Cash Oriented Income.**

Q1. How many people do you know in Wiseman who earn cash income outside the Wiseman area, and approximately how long do these people stay outside Wiseman when working at their jobs?
Q2. How important is the tourist industry to Wiseman resident and how is its influence felt?

**Section 5. The Future of Wiseman.**

Q1. How do you feel about the future of Wiseman?
Q2. What do you think are the principle reasons that people either move to or away from Wiseman?
Q3. Do you have any concerns about opening the Haul Road, and how might it impact the character of the community? Please describe any anticipated impacts.
Q4. Do you feel that the influence of the tourism industry will grow in Wiseman? Why or why not?
Q5. Do you think there will be more land bought by individuals in the Wiseman area in the future?
Q6. Are there any new businesses in town? Do you know of any to be established in the near future?
Q7. Do you have any concerns about the future of Wiseman? Do some of the possible changes worry you in terms of maintaining your lifestyle? What does the future look like through your eyes?

**Section 6. Subsistence Policy.**

Q1. Do you approve or disapprove of the subsistence policies that are carried out by the various government agencies in the Wiseman area? How would you improve these policies?
Q2. What criteria would you use to define a rural resident zone and an individual subsistence use permit? Either could be used to allocate subsistence priorities.

Q3. If you had to make a choice, which system of subsistence regulation would you prefer; a rural resident zone or an individual subsistence use permit? Why?

**Section 7. Perceptions of Respondents.**

Q1. Do you have any concerns about subsistence? What does the future of subsistence look like through your eyes?
Q2. Any additional comments are welcome.

## SURVEY #2. WISEMAN RESIDENTS ONLY

### Residency Question:

Since first moving to Wiseman, approximately how many months have you lived in the community. For example, if you moved to Wiseman in 1986 and stayed 8 months, then 7 months in 1987, 0 months in 1988, and 10 months in 1989, 10 months in 1990 and 8 months in 1991, the response to the question would be 43.

### Trapping Questions:

1. How many miles of trapline do you maintain, on average, for any given five year period? This is not limited to the number of miles used in any one year, but rather, total miles available for use if you choose all or any portion.

2. Approximately how many miles of your total available trapline mileage is within Gates of the Arctic National Park?

3. What were your highest (estimated) harvest ever for any given season for the following species?
Marten
Lynx
Wolf
Wolverine
Coyote

4. What were your lowest harvest rates (estimated) you have ever experienced for any one trapping season?
Marten
Lynx
Wolf
Wolverine
Coyote

5. Have you observed whether the best trapping habitat is inside of outside the park?

What percentage of the best trapline habitat would you estimate is in the park for the trapline miles you maintain or use?
0-20%
21-40%
41-60%
61-80%
81-100%

6. What percentage of harvested furbearers, for the following species, would you say you harvest in the park?
Marten
Lynx
Wolf
Wolverine
Coyote

**Game Species Questions**

1. Please answer the questions for the following species based upon numbers you have harvested for any one given year since you first moved to Wiseman.

| Species | Maximum | Minimum | Average |
|---|---|---|---|
| Caribou | | | |
| Moose | | | |
| Sheep | | | |
| Black Bear | | | |

2. Please Answer "yes" or "no" to the following questions regarding season of harvest. The question is, have you ever harvested at least one animal during the following months, in the area of the park before or after its establishment, since moving to Wiseman?

Species: Caribou, Moose, Sheep, B. Bear

Months: Jan., Feb., March, April, May, June, July, Aug., Sept., Oct., Nov., Dec.

2. (B). Same question as above, however, consider those areas outside the park only.

3. Please answer "yes" or "no" to the followin questions based upon the total time since you moved to Wiseman. Have you harvested any of the following species in the distance range provided? Distances are from Wiseman, for harvesting in the park area, both before and after the park's establishment.

Species: Moose, Caribou, Sheep, B. Bear.

Distances: <5 mi., 5-10 mi., 10-20 mi., 20-40 mi., 40-60 mi., >60 mi.

3. (B). Same question as in 3 above except dealing with game harvested outside the region of the park.

4. Please identify, with a "yes" or "no" and, if possible, with numbers of harvested individuals, for each species identified since you first moved to Wiseman. This question deals with time and place harvests by Wiseman area residents in the park.

A. Moose

| | <5 mi. | 5-10 | 10-20 | 20-40 | 40-60 | >60 mi. |
|---|---|---|---|---|---|---|
| Jan. | | | | | | |
| Feb. | | | | | | |
| Mar. | | | | | | |
| Apr. | | | | | | |
| May | | | | | | |
| Jun. | | | | | | |
| Jul. | | | | | | |
| Aug. | | | | | | |
| Sep. | | | | | | |
| Oct. | | | | | | |
| Nov. | | | | | | |
| Dec. | | | | | | |

B. Sheep (same matrix).

C. Caribou (same matrix).

D. Black Bear (same matrix).

5. For the following months, distances traveled, and harvested species, please identify the principal means of transportation used to harvest an individual animal in the park. "Principal" is defined as the method covering the greatest miles traveled. Thus if a person packed an animal 3 miles, and drove 5 miles along the road to the point in which packing ended, the principal means of transport would be by truck. Please select from the following choices: Foot, Dog team, Snow machine, Truck/Car, Plane, and Three/Four-wheeler.

Same schedule of matrices and game species as the previous question.

**The following question was asked later:**

What percentage of the following harvested game species would you say you have harvested in the park since you first moved to Wiseman?

## SURVEY #3 WISEMAN RESIDENTS ONLY

1. Since you moved to Wiseman, has the overall location(s) of your harvesting activity changed:

a. Please indicate on the map the areas you used for subsistence activities prior to 1980.

b. Please indicate on the map any areas you used for subsistence activities between 1980 and 1985.

c. Please indicate on the map any areas you used for subsistence activities after 1985.

Please explain any factors that have caused or contributed to any change of location in your subsistence harvesting activities:

2. Since 1980, how many years have you run a trapline?

3. Before 1980, how many years did you run a trapline?

4a. What is your average harvest of the following furbearers for any one given year since you moved to Wiseman?

| Species: | Average One Year Harvest |
|---|---|
| Lynx | |
| Wolf | |
| Wolverine | |
| Marten | |
| Fox | |

b. Given the range of harvest of these species (maximum and minimum harvest levels you estimated in the previous survey), how do you account for these fluctuations in harvest levels?

Maximum =

Minimum =

Factors that cause or influence harvest fluctuation:

## 5a. Game Harvest:

Please give the approximate numbers of the following species that you have harvested inside and outside the park area, in the following time frames:

| Time Frame | MOOSE | | SHEEP | | CARIBOU | | BLACK BEAR | | GRIZZLY BEAR | |
|---|---|---|---|---|---|---|---|---|---|---|
| | in | out | in | out | in | out | in | out | in | out |
| Since 1985 | | | | | | | | | | |
| Between 1980 and 1985 | | | | | | | | | | |
| Before 1980 | | | | | | | | | | |

b. How do you account for any differences in the approximate numbers of animals harvested both inside and outside the park area in the varying time frames? What are the factors that have influenced any changes in these numbers?

## 6a. Trapping Harvest:

Please give the approximate numbers of the following species that you have harvested inside and outside the park area, in the following time frames:

| Time Frame | Lynx | | Wolf | | Wolverine | | Marten | | Fox | |
|---|---|---|---|---|---|---|---|---|---|---|
| | in | out | in | out | in | out | in | out | in | out |
| Since 1985 | | | | | | | | | | |
| Between 1980 and 1985 | | | | | | | | | | |
| Before 1980 | | | | | | | | | | |

b. How do you account for any differences in the approximate numbers of animals harvested both inside and outside the park area in the varying time frames? What are the factors that have influenced any changes in these numbers?

**Subsistence Resource Consumption:**

Approximately how many pounds per year does your household consume of the following resources, and how do you anticipate that this estimate will change, if at all, in the next five years? In the next ten years? How has this consumption changed from the past five years? The past ten years?

**7a. Game Harvest:**

| Species: | Pounds Consumed per Year | Estimated Change in the Next Five Years | Estimated Change in the Next Ten years | Change from the Past Five Years | Change from the Past Ten Years |
|---|---|---|---|---|---|
| Moose | | | | | |
| Caribou | | | | | |
| Sheep | | | | | |
| Black Bear | | | | | |
| Grizzly Bear | | | | | |
| Purchased Meat | | | | | |
| Other: (list) | | | | | |
| | | | | | |
| | | | | | |

b. What factors influence your household consumption of the above species? How do you account for any anticipated changes in consumption of the above species? How do you account for any past changes in consumption of the above species?

**8a. Fish Harvest:**

| Species: | Fish Consumed per Year | Estimated Change in the Next Five Years | Estimated Change in the Next Ten years | Change from the Past Five Years | Change from the Past Ten Years |
|---|---|---|---|---|---|
| Grayling | | | | | |
| Lake Trout | | | | | |
| Pike | | | | | |
| Burbot | | | | | |
| Sheefish | | | | | |
| Red Salmon | | | | | |
| Whitefish | | | | | |
| Purchased Fish | | | | | |
| Other: (list) | | | | | |
| | | | | | |
| | | | | | |

b. What factors influence your household consumption of the above species? How do you account for any anticipated changes in consumption of the above species? How do you account for any past changes in consumption of the above species?

**9a. Furbearers: Human and dog consumption** (pounds, pelts, or number of carcasses).

| Species | Average Yearly Dog Consumption | Average Yearly Household Use and/or Consumption | Anticipated Change in the Next Five Years | Anticipated Change in the Next Ten Years |
|---|---|---|---|---|
| Lynx | | | | |
| Wolf | | | | |
| Wolverine | | | | |
| Marten | | | | |
| Fox | | | | |
| Beaver | | | | |
| Muskrat | | | | |
| Mink | | | | |
| Weasel | | | | |
| Other: | | | | |

b. How do you account for any anticipated changes in use or consumption of the above species? What factors influence your household use or consumption of the above species?

c. Has this consumption changed from previous years? Please describe any changes, and explain any factors that influence these changes:

In the past five years:

In the past ten years:

10. If the Haul Road was to be legally opened for public travel, do you anticipate any change in your furbearer harvest levels in order to supply furbearer products and/or articles for sale or trade? Please explain your answer.

11a. What is your approximate average percent income from the following furbearer species?

Total Percent Income From Trapping, from previous survey:

Breakdown average percents of this total percent:

| Species: | Average Percent of Total % Income | Maximum Percent of Total % Income | Minimum Percent of Total % Income |
|---|---|---|---|
| Lynx | | | |
| Wolf | | | |
| Wolverine | | | |
| Marten | | | |

b. Given the range of these percents, (maximums and minimums), how do you account for this variation in these percents?

**12. Wood:**
Has the amount of wood that you harvested changed in the following time periods? Please explain any variations in the amount of wood harvested.

**Since 1985:**
**Between 1980 and 1985:**
**Before 1980:**

**13. Berries:**
Has the amount of berries that you harvested changed in the following time periods? Please explain any variations in the amount of berries harvested.

**Since 1985:**
**Between 1980 and 1985:**
**Before 1980:**

14. For the following months, distances traveled, and harvested species **in the park area since 1980**, please indicate the method(s) of transportation used in that harvest. Please select from the following choices: snow machine, three or four wheeler, truck or car, aircraft, dog team, pack dogs, walking.

A. MOOSE

| Month | <5 mi. | 5-10 mi. | 10-20 mi. | 20-40 mi. | 40-60 mi. | >60 mi. Please list maximum mileage |
|---|---|---|---|---|---|---|
| Jan. | | | | | | |
| Feb. | | | | | | |
| Mar. | | | | | | |
| Apr. | | | | | | |
| May | | | | | | |
| Jun. | | | | | | |
| Jul. | | | | | | |
| Aug. | | | | | | |
| Sep. | | | | | | |
| Oct. | | | | | | |
| Nov. | | | | | | |
| Dec. | | | | | | |

This table is repeated for Sheep, Caribou, Black Bear, and Grizzly Bear.

15. For the following months, distances traveled, and harvested species **outside the park area since 1980**, please indicate the method(s) of transportation used in that harvest. Please select from the following choices: snow machine, three or four wheeler, truck or car, aircraft, dog team, pack dogs, walking.

A. MOOSE

| Month | <5 mi. | 5-10 mi. | 10-20 mi. | 20-40 mi. | 40-60 mi. | >60 mi. Please list maximum mileage |
|---|---|---|---|---|---|---|
| Jan. | | | | | | |
| Feb. | | | | | | |
| Mar. | | | | | | |
| Apr. | | | | | | |
| May | | | | | | |
| Jun. | | | | | | |
| Jul. | | | | | | |
| Aug. | | | | | | |
| Sep. | | | | | | |
| Oct. | | | | | | |
| Nov. | | | | | | |
| Dec. | | | | | | |

This table is repeated for Sheep, Caribou, Black Bear, and Grizzly Bear.

16. For the following months, distances traveled, and harvested species **in any area before 1980**, please indicate the method(s) of transportation used in that harvest. Please select from the following choices: snow machine, three or four wheeler, truck or car, aircraft, dog team, pack dogs, walking.

A. MOOSE

| Month | <5 mi. | 5-10 mi. | 10-20 mi. | 20-40 mi. | 40-60 mi. | >60 mi. Please list maximum mileage |
|---|---|---|---|---|---|---|
| Jan. | | | | | | |
| Feb. | | | | | | |
| Mar. | | | | | | |
| Apr. | | | | | | |
| May | | | | | | |
| Jun. | | | | | | |
| Jul. | | | | | | |
| Aug. | | | | | | |
| Sep. | | | | | | |
| Oct. | | | | | | |
| Nov. | | | | | | |
| Dec. | | | | | | |

This table is repeated for Sheep, Caribou, Black Bear, and Grizzly Bear.

17. **Use Of Other Subsistence Resources:**
For the following subsistence resources, please note use(s) of the resource and the approximate yearly average amounts of the resource harvested inside and outside the park area.

## Game Species:

| Species | Use(s) | Average Yearly Amount Harvested Inside Park | Average Yearly Amount Harvested Outside Park |
|---|---|---|---|
| rabbits (hares) | | | |
| ground squirrel | | | |
| red squirrel | | | |
| porcupine | | | |
| grouse | | | |
| ptarmigan | | | |
| ducks | | | |
| geese | | | |
| mice | | | |
| Other (list): | | | |
| | | | |

Does variation exist in the approximate amounts harvested in any given year, either inside or outside the park, or both? If so, what factors influence any such variation?

## Furbearer Species:

| Species | Use(s) | Average Yearly Amount Harvested Inside Park | Average Yearly Amount Harvested Outside Park |
|---|---|---|---|
| beaver | | | |
| muskrat | | | |
| mink | | | |
| weasel | | | |
| Other (list): | | | |
| | | | |

Does variation exist in the approximate amounts harvested in any given year, either inside or outside the park, or both? If so, what factors influence any such variation?

**Fish Species:**

| Species | Use(s) | Average Yearly Amount Harvested Inside Park | Average Yearly Amount Harvested Outside Park |
|---|---|---|---|
| grayling | | | |
| lake trout | | | |
| pike | | | |
| burbot | | | |
| sheefish | | | |
| red salmon | | | |
| whitefish | | | |
| Other (list): | | | |
| | | | |

Does variation exist in the approximate amounts harvested in any given year, either inside or outside the park, or both? If so, what factors influence any such variation?

**Berry Species:**

| Species | Use(s) | Average Yearly Amount Harvested Inside Park | Average Yearly Amount Harvested Outside Park |
|---|---|---|---|
| blueberries | | | |
| lowbush cranberries | | | |
| raspberries | | | |
| moss (crow)-berries | | | |
| rose hips | | | |
| nagoon berries | | | |
| cloudberries | | | |
| bearberries | | | |
| Other (list): | | | |
| | | | |

Does variation exist in the approximate amounts harvested in any given year, either inside or outside the park, or both? If so, what factors influence any such variation?

**Wood:**

| Species | Use(s) | Average Yearly Amount Harvested Inside Park | Average Yearly Amount Harvested Outside Park |
|---|---|---|---|
| spruce | | | |
| birch | | | |
| cottonwood | | | |
| aspen | | | |
| diamond willow | | | |
| alder | | | |
| spruce boughs | | | |
| sticks/poles | | | |
| Other (list): | | | |
| | | | |

Does variation exist in the approximate amounts harvested in any given year, either inside or outside the park, or both? If so, what factors influence any such variation?

**Vegetation:**

| Species | Use(s) | Average Yearly Amount Harvested Inside Park | Average Yearly Amount Harvested Outside Park |
|---|---|---|---|
| birch leaves | | | |
| willow leaves | | | |
| rose hip leaves | | | |
| coltsfoot | | | |
| dandelions | | | |
| fireweed | | | |
| Labrador tea | | | |
| Hudson Bay tea | | | |
| chamomile | | | |
| caribou lichen | | | |
| lambs quarter | | | |
| pineapple weed | | | |
| kinnikinnick | | | |
| wild chives | | | |
| plantain | | | |
| Eskimo potato | | | |
| spruce pitch | | | |
| willow bark | | | |
| birch bark | | | |
| birch sap | | | |
| grasses | | | |
| moss | | | |
| mud | | | |
| rock | | | |
| mushrooms (6 species) | | | |
| birch tree fungus | | | |
| Other (list): | | | |

Does variation exist in the approximate amounts harvested in any given year, either inside or outside the park, or both? If so, what factors influence any such variation?

18. Is there a distinction between a 'subsistence lifestyle', and a 'subsistence way of life'?

19. Context and conversation: I seem to change the way I speak, depending on to whom I am speaking regarding subsistence resource use and subsistence concerns. Can you comment on this? How do you operate in context?

## SURVEY #4 PART-TIME AREA RESIDENTS

## WISEMAN SUBSISTENCE STUDY

## CONTEMPORARY PART-TIME AREA RESIDENT SURVEY

I am Carol Scott from the University of Alaska, Fairbanks. I am conducting a study of the subsistence activities of the people who reside in the Wiseman area. This study is funded by the National Park Service through the Agricultural and Forestry Experiment Station of the University.

Thank you for your willingness to participate. I will be glad to answer any questions you may have about the process. I will be interviewing all part-time residents using the same interview form.

We will work through this interview form together, as an oral interview. I will be taking notes as we converse.

_____

Household Location

| _____ | _____ | _____ |
|---|---|---|
| ID # | Date/Time | Interviewer |

1. Where is your permanent residency?

2. For how long have you been living in the Wiseman area for part of the year?

3. What months of the year do you spend in this area?

4. How frequently do you stay in the area?

5. How long do you stay in the area when you stay here? What is the longest length of time? The shortest length of time?

6. Do you own property in this area? Please explain.

7. Do you think that there will be more land bought by individuals in the Wiseman area in the future? Why or why not?

8. Do you live in any cabins while you are in this area? If so, who owns the cabin(s)?

9. What do you do while you are living in the area?

10. What do you do while you are not living in this area?

11. What are the factors that attracted you to this area?

12. Have you ever considered becoming a full-time resident of Wiseman? Please explain your answer.

13. Under what conditions would you foresee becoming a full-time resident of Wiseman?

14. Do you foresee these conditions as existing in the future? How near in the future? Please explain.

15. Have you ever considered selling your property in Wiseman? Please explain your answer.

16. Under what conditions would you foresee selling your property in Wiseman?

17. Do you foresee these conditions as existing in the future? How near in the future? Please explain.

18. Has the overall population, and the population dynamics of the area changed since you first came to this area? If so, please describe these changes in the population of the area, and explain what caused these changes.

19. Do you interact at all with the permanent residents of the community of Wiseman? If so, please describe this interaction.

20. Are you in any way dependent upon the community of Wiseman for goods and services? If so, please explain.

21. How important is the tourist industry to full-time residents of Wiseman ? How important is the tourist industry to part-time residents of Wiseman?

22. Do you feel that the influence of the tourism industry will grow in this area? Please explain why or why not.

23. How important is the mining industry to this area? Why, and in what ways is it important?

24. Do you feel that the influence of the mining industry will grow in this area? Please explain in either case.

25. Do you know of any new businesses or mining operations that are being established in this area? If so, what are they?

26. Do you have any concerns about the future of the Wiseman area? If so, what are they?

27. How has the area changed, if at all, since you first spent time here? What changes have you seen in this area?

28. Do you consider yourself a subsistence user of local resources? Please explain how you are or are not such a user.

29. Do you or have you ever utilized any of the area's natural resources? If so, what resources do you or have you used, and how do you or did you use them?

30. What is or are the general location(s) of the area(s) in which you harvest these resources?

31. Which of the above listed resources do you or have you harvested in Gates of the Arctic National Park? Did this harvest occur before and/or after the area became a park?